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DEVELOPMENT OF A PILOT EDUCATIONAL SEMINAR FOR THE INTEGRATIVE MEDICAL MANAGEMENT OF ADULTS WITH ANXIETY

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DEVELOPMENT OF A PILOT EDUCATIONAL SEMINAR FOR THE INTEGRATIVE MEDICAL MANAGEMENT OF ADULTS WITH ANXIETY

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ABSTRACT

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Anxiety is a global disease that continues to rise. The COVID 19 global pandemic, natural disasters due to climate change, war, and personal stressors continue to cause the steady rise in anxiety worldwide. As many as 40 million Americans suffer from anxiety. A review of standard anxiety treatments including selective serotonin reuptake inhibitors such as Prozac, benzodiazepines such as Xanax, and cognitive behavioral therapy revealed they only provided relief for approximately half of the patients treated. Over the past two years, provider colleagues and their clients in an outpatient private practice where this educational seminar took place had been increasingly expressing an interest in integrative methods for the management of adult anxiety. This Doctor of Nursing Practice quality improvement pilot project aimed to address this issue through creation of an online educational seminar presented to the nurse practitioners at a small outpatient behavioral health clinic. Although inferential statistics were unable to be conducted for this project, the results demonstrated that the participants in this small pilot study showed a small increase in mean that we could infer as a trend toward increasing knowledge and understanding. However, no significant changes were noted in provider attitudes toward integrative healthcare. A limitation of this project included a small sample size from one location.

Keywords: advanced practice providers, anxiety, integrative treatments, ashwagandha

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CHAPTER I

INTRODUCTION

Mental health is one of the leading causes of illness worldwide. Anxiety and depression, the two most common mental illnesses, cost the global economy over a trillion dollars every year (World Health Organization [WHO], 2022). Anxiety and depression can be co-occurring, and an untreated anxiety disorder may be the underlying cause of many cases of depression (Anxiety and Depression Association of America [ADAA], 2021). Anxiety disorders have a hospitalization rate six times higher compared with other psychiatric disorders; as many as 40 million Americans or an estimated 18% of the population suffer from anxiety (ADAA, 2021).

Anxiety is an emotion most people feel to varying degrees in their life such as during an exam or a job interview but an anxiety disorder can be a debilitating disease that causes emotional distress, panic, isolation, and an increased risk for the development of depression and suicidal ideation (National Institute of Mental Health (NIMH], 2018). In 2021, the Centers for Disease Control and Prevention [CDC], 2022) reported that anxiety increased by 13% from August to December 2020 (Jia et al., 2021). The number of adults with anxiety is expected to climb with the continuation of the global COVID 19 pandemic and the increase in natural disasters related to climate change, both significant stressors contributing to the prevalence and intensity of anxiety across global populations (CDC, 2022).

Background

Current Treatment Options for the Management of Adult Anxiety

Despite anxiety being recognized worldwide as a pressing health issue, standard pharmacological treatments are only moderately successful and pose risks and undesirable side effects for many patients. The most prescribed medications are in the selective serotonin reuptake inhibitors (SSRIs) category, yet these drugs have a success rate of only 60-80% and only half of patients prescribed a medication from this class achieve complete relief from their symptoms (Garakani et al., 2020). Serotonin reuptake inhibitors also carry a significant amount of side effects including weight gain, sexual dysfunction, insomnia, headaches, and gastrointestinal upset (Stahl, 2021). Serotonin-norepinephrine reuptake inhibitors (SNRIs) are also used to treat anxiety but carry an even greater risk of side effects including significant sexual dysfunction, weight gain, elevated blood pressure, and discontinuation syndrome. Discontinuation syndrome is a very uncomfortable side effect for clients that might include flu-like symptoms, dizziness, nausea, and insomnia when missing a dose or trying to stop the medication (Stahl, 2021). Older treatments for anxiety such as tricyclic antidepressants (TCAs) and monoamine oxidase inhibitors (MAOIs) are reserved for treatment as a last step in most cases due to safety concerns from side effects, lethality in overdose with TCAs, possible hypertensive crisis with exposure to tyramine with MAOIs, as well as significant sexual side effects and weight gain (Stahl, 2021).

Benzodiazepines work on the same receptors in the brain as alcohol does with similar effects such as fatigue, lack of judgment leading to inability to drive and work, short term and long-term memory loss, dependency, and withdrawal symptoms that could cause injury or death (Lader & Kyriacou, 2016). Benzodiazepines have been used with caution in the treatment of

anxiety disorders over the past decade but due to these significant side effects, their use has been minimal.

Due to the above psychopharmaceuticals carrying a myriad of unpleasant and even life-threatening side effects as well as the potential only partially to alleviate anxiety symptoms, many people with an anxiety disorder will stop taking these medications, often against medical advice (Burton et al., 2015). Burton et al. (2015) found that among 24,000 patients in a primary care database prescribed medications to treat anxiety, approximately 28% discontinued use after a single 30-day prescription. This was especially concerning because many of these medications required up to 12 weeks to reach effectiveness (Stahl, 2021).

Increasing Demand for Alternative/ Complementary Treatments for Adult Anxiety

According to The National Center for Complementary and Alternative Medicine (NCCIH, 2018), integrative medicine combines conventional and alternative/complementary approaches with an emphasis on the needs and preferences of the whole person rather than a particular disease state. A study from Gannotta et al. (2018) noted integrative treatments were not only sought by many patients as adjuncts to traditional management of anxiety in hospital settings but an increasing number of providers also believed integrative treatments had the potential to reduce stress and lower hospital costs. A survey conducted at Baylor University in Texas revealed that 80% of resident physicians on a pediatric unit reported their patients used alternative/complementary therapies and 90% believed their knowledge of integrative medicine needed expansion (Gannotta et al., 2018). For this pilot project, alternative/complementary referred to supplements or treatments not included in typical conventional treatments. The use of alternative/complementary and conventional treatments was the basis of integrative treatment.

Some alternative/complementary treatments for anxiety that have proven efficacious and safe include supplementation with ashwagandha, chamomile, magnesium, passionflower, and valerian. Ashwagandha and chamomile have been used for decades in the treatment of anxiety and create a sense of calm and relaxation, and magnesium is a much needed and often deficient nutrient that helps with multiple body processes as well as calming properties (Borrás et al., 2021; Hieu et al., 2019; Lopresti et al., 2019; Rycroft-Malone & Tsai, 2018). Passionflower and valerian are plant-based extracts that can provide relief from anxiety symptoms by themselves or in conjunction with other conventional treatment methods (Borrás et al., 2021; Gibbert et al., 2017; Shinjyo et al., 2020). In addition, non-pharmaceutical modalities such as biofeedback and meditation have been used as alternative/complementary treatments for managing anxiety by teaching individuals to recognize and control involuntary body processes such as heart rate, creating a sense of feeling centered and grounded in the moment instead of dwelling in the worry and unknown of the future (Arizteca et al., 2017; Bandelow et al., 2015; Goessl et al., 2017; Kim & Kim, 2018; Saeed et al., 2019).

One reason why integrative treatment mght not be utilized as widely as conventional treatment in the United States are conflicting methods of training and education among providers. One way of training involves strict adherence to conventional psychiatry and medical practices, while another form of training focuses on alternative/complementary treatment methods with minimal crossover between the two approaches (Lake & Turner, 2017). As an alternative to this dichotomy, integrative care focuses on blending conventional and alternative/complementary treatments to look at the entire constellation of symptoms and provide treatment based on a holistic view of the entire patient (Lake & Turner, 2017). Integrative providers “make use of the full complement of therapies when constructing a plan of care for

their patients" (Kreitzer & Koithan, 2019, p. 13). Gregory and Hardy (2022) highlighted the need for better anxiety treatments by simply focusing on psychopharmacological options for primary care advanced practice nurse practitioners, yet the research suggested these methods had a high rate of treatment failure, indicating additional approaches outside of traditional methods of treatment were called for (Garakani et al., 2020; Gregory & Hardy, 2022).

Many psychiatric mental health nurse practitioners echo these findings, noting a continued rise of anxiety in the population. Over the past two years, provider colleagues and their clients in the outpatient private practice where this educational seminar took place have increasingly expressed an interest in integrative methods for the management of adult anxiety. Several practitioners in this practice carry certification in integrative mental health from the Integrative Psychiatry Institute in Boulder, Colorado. However, most of the providers in this practice do not have training or knowledge of integrative treatment methods and rely heavily on those with integrative expertise to guide their decision-making.

Provider Receptivity to the Use of Alternative/Complementary Treatment Options

Receptivity and knowledge of alternative/complementary treatments continue to be a barrier for more widespread integration of this treatment into medical practices. A study from Fletcher et al. (2017) in the Veterans Administration (VA) healthcare service was conducted to assess provider and administrators' perceptions of alternative/complementary treatment. The study found that while the VA did promote alternative/complementary treatments, the adoption and use of these treatments were not represented in use of the treatments. The study found that even though over 50% of active-duty service members utilized alternative/complementary for multiple conditions to include pain management, mental health management, and barriers to

treatment including provider knowledge of referral within the system, personal provider knowledge and attitude toward alternative/complementary treatment were not able to meet the demands for more access to this treatment method (Fletcher et al., 2017).

Abbott et al. (2009) conducted a study using a modified version of the Integrative Medicine Attitude Questionnaire to measure medical students' attitudes toward alternative/complementary treatment. Recruitment for this study was sent to every medical college across the United States. This study found the medical students surveyed had a favorable attitude toward the idea of alternative/complementary medicine but not a favorable view of use of alternative/complementary treatments in practice (Abbott et al., 2009).

Attitude toward the use of alternative/complementary plays a role in its use and even those who might view the idea of this treatment as positive, implementation into practice has not been equal (Abbott et al., 2009; Fletcher et al., 2017).

Existing Practice Protocols for the Management of Adult Anxiety

Currently, there is a lack of practice protocols or algorithms designed to help providers navigate the full spectrum of treatment options for adults with anxiety. Instead, many providers rely on conventional psychopharmacologic guidebooks or websites such as those from the American Psychiatric Association (n.d.) whose practice guidelines include standard treatments. Of note, no current practice guidelines or protocols for alternative/complementary treatments for anxiety were on the APA (2013) website but they did have alternative/complementary guidelines for other mental health disorders such as depression. Even within the federally funded NCCIH (2018), there was a distinct lack of guidance for alternative/complementary treatments for anxiety to help providers with or without integrative training. In the book *Integrative Nursing* (Kreitzer & Koithan, 2014), the section devoted to anxiety provided a "tier" table for anxiety.

Unfortunately, this table lacked specific dosing and guidelines, rendering it useless to someone unfamiliar with integrative medicine and further limiting the use of integrative approaches to treatment for anxiety (Kreitzer & Koithan, 2014). Traditional approaches rely heavily on medications and therapy but often exclude alternative/complementary treatments for providers to guide their prescribing (APA, 2013; Kreitzer & Koithan, 2014; NCCIH, 2018; Stahl, 2021). Therefore, many mental health providers are limited in their ability to provide comprehensive and effective care to this population.

Statement of the Problem

Anxiety is a global issue that is estimated to increase. Anxiety can lead to lost wages, depression, and suicide (WHO, 2022). The need for a wider variety of safe and effective treatments for adult anxiety is needed to reduce anxiety symptoms in the population (ADAA, 2021). There is a lack of guidelines or protocols for advanced practice providers to consult while treating adult anxiety that incorporates both conventional and alternative/complementary approaches based on both evidence and patient demand (ADAA, 2021; CDC, 2022; NCCIH, 2022). Attitudes toward alternative/complementary, as well as a lack of knowledge and resources, leave a gap in care that might inhibit use of these treatments. This might lead to hesitation on the part of providers in utilizing these methods despite their potential to alleviate symptoms and improve quality of life (Abbott et al., 2009; Gregory & Hardy, 2022).

Purpose of the Project

This Doctor of Nursing Practice (DNP) scholarly quality improvement pilot project was the development of an online educational seminar presented to nurse practitioners at an outpatient mental health private practice and evaluated if the online educational seminar enhanced their understanding, knowledge, and attitudes toward the use of alternative/

complementary treatments for adults with anxiety, which would create an integrative approach to treating adults with anxiety in the outpatient setting. Since the providers in this practice were all versed in conventional treatments for anxiety, this online educational seminar provided alternative/complementary treatment methods that increased their knowledge and comfort in offering these treatments blended with conventional treatments, which is the basis of integrative care.

Need for the Project

The increase in anxiety and lack of integrative practice knowledge created a clear gap in treatment for this continued rising global issue that was filled by an online seminar that educated providers on alternative/complementary treatments. For nurse practitioners already versed in conventional treatment methods for anxiety, a wider scope of treatments to help alleviate the global burden provide a broader scope of practice tools to address this gap.

Project Questions

This DNP scholarly quality improvement pilot project addressed the following questions:

Q1 Will an educational seminar focused on integrative treatment options for anxiety improve mental health provider's awareness and knowledge regarding two common integrative treatment options for adults with anxiety (meditation and ashwagandha)?

Q2 Will participation in the educational seminar on integrative treatment options for anxiety impact the attitudes and receptivity of mental health providers towards using integrative approaches in the future with adult patients seeking treatment for anxiety?

Objectives of the Project

The objectives of the project were to

1. Synthesize current evidence and practice expertise from integrative providers in the outpatient mental health private practice to develop an online educational

seminar of two alternative/complementary treatments for the adult population with anxiety.

2. Develop and conduct an online educational seminar to be given to the advanced practice providers at the identified private practice.
3. Evaluate the advanced practice providers attitudes, receptivity, knowledge and understanding towards utilizing integrative treatment approaches for adults with anxiety before and after participation in the online educational seminar
4. Develop a template for further educational seminars to increase and expand knowledge of integrative treatment methods.

Summary

Anxiety is an increasing global disease that is estimated to increase. Climate change, the COVID-19 global pandemic, and wars continue to increase the global burden of anxiety. Existing treatment methods are not sufficient alone to treat all individuals affected by anxiety and an integrative treatment approach could help to increase options in treatment for providers and individuals.

Definition of Terms and Acronyms

Ashwagandha: An herb from India or Nepal commonly utilized to promote relaxation and a feeling of calm (Consumerlab, 2022).

Benzodiazepines: A class of medications typically used for their tranquilizing properties (Merriam-Webster, n.d.-a).

Bio Feedback: Learning to make unconscious body processes, such as the rate of the heart, perceptible to the conscious mind to help control them (Merriam-Webster, n.d.-b).

Cognitive Behavioral Therapy (CBT): Psychotherapy that combines cognitive as well as behavioral therapy to help to identify and change maladaptive thoughts and behaviors (Merriam-Webster, n.d.-c).

Dietary Supplement Verification Program: A nonprofit scientific organization that tests supplements for safety and efficacy to help ensure quality products for the consumer (United States Pharmacopeial Convention, n.d.).

Dissemination and Use of Research Evidence for Policy and Practice (DUREPP): Abbreviation used in this paper in reference to this model.

Integrative treatment: Combining conventional and complementary/alternative approaches to treat the whole person (NCCIH, 2018).

L-Theanine: A product of green and black tea that is considered a non-essential amino acid (Consumerlab, 2022).

Monoamine Oxidase Inhibitors (MAOIs): Antidepressants that increase monoamine in the brain by inhibiting its action (Merriam-Webster, n.d.-d).

Selective Serotonin Reuptake Inhibitors (SSRIs): Antidepressants that inhibit the inactivation of serotonin in the brain, making it more available for use in the brain (Merriam-Webster, n.d.-e).

Serotonin Norepinephrine Reuptake Inhibitors (SNRIs): Drugs that inhibit the inactivation of serotonin and norepinephrine, making them more available for use in the brain (Merriam-Webster, n.d.-f).

Tricyclic Antidepressants (TCAs): Antidepressants that inhibit the action of catecholamines, but do not inhibit actions of monoamines (Merriam-Webster, n.d.-g).

CHAPTER II

REVIEW OF THE LITERATURE AND THEORETICAL FRAMEWORK

A review of the literature regarding integrative and standard treatments for anxiety was conducted between October 2021 and April 2022 using the following databases: Cumulative Index to Nursing and Allied Health Literature (CINHAL), PsycINFO, and PubMed. The search terms used were “anxiety,” “integrative treatment,” and “adult.” The Boolean operator “AND” was used to connect these terms. To narrow the list and find more specific integrative literature, the words “dietary supplements” and “medicinal plants” were also added to “anxiety,” “integrative treatment,” and “adult” with continued use of the Boolean operator “AND.” Based on most used integrative treatment options for adult anxiety referenced in the literature review and the NCCIH (2022), the following additional terms were added to the search: “l-theanine,” “ashwagandha,” “magnesium,” “omega-3”, “meditation,” “relaxation,” and “biofeedback.” Each of these terms was added to the original terms (“anxiety-integrative-treatment-adult”) with the Boolean operator “AND.” Inclusion criteria included information within the last five years, adult participants, randomized control trials, meta-analysis, and systematic reviews. Exclusion criteria included articles older than five years, low-level evidence, or those that focused on treatments for depression only. Findings from this literature search are detailed in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses diagram in Appendix A.

Twenty-three articles were included in this review. Integrative studies are historically of lower quality so randomized placebo-controlled trials, meta-analysis, and systematic reviews

were included to utilize the highest quality evidence. This review provided the following evidence: one randomized double-blind placebo-controlled study and a systematic review concerning ashwagandha (Borrás et al., 2021; Lopresti et al., 2019); one meta-analysis and one systematic review for chamomile and one practice recommendation (Hieu et al., 2019; Rycroft-Rycroft-Malone & Tsai, 2018); one small, randomized placebo controlled study concerning l-theanine and a double blind randomized placebo control trial (Hidese et al., 2019; Sarris et al., 2019); two systematic reviews for omega-3 (Deane et al., 2021; Su et al., 2018); one post hoc analysis of an randomized control trial and one systematic review for magnesium (Boyle et al., 2017; Noah et al., 2021); seven studies for meditation/relaxation/biofeedback including two meta-analysis for meditation, one systematic review and meta-analysis and one meta-analysis for relaxation (note Bandelow et al. was used for meditation and relaxation), one meta-analysis and one small academic study for bio feedback, and one meta-analysis and one systematic review and meta-analysis for exercise (Arizteca et al., 2017; Aylett et al., 2018; Bandelow et al., 2015; Goessl et al., 2017; Kim & Kim, 2018; Kligler et al., 2016; Saeed et al., 2019); one meta-analysis and one systematic review for standard treatment (Bandelow et al., 2015; DeMartini et al., 2019); one systematic review and meta-analysis and one literature review for Cognitive behavioral therapy (Daitch, 2018; van Dis et al., 2020); and one developmental research article regarding the Integrative Medicine Attitude Questionnaire (Schneider et al., 2003). Appendix B provides the complete Table of Evidence, which presents summaries of each article.

Historical Background

Anxiety

Since ancient times, philosophers have been writing about and recommending treatments for anxiety. In 50 BC, Roman philosopher Cicero wrote of *sollicitado* (worry) and *angor*

(anxiety) as disorders between a troubled mind and body in his book *The Tusculan Disputations* (Crocq, 2015). Some philosophers thought anxiety came from the finite mind trying to come to terms with the infinite. The recommendation to relieve symptoms was to focus on the now instead of worrying about the future (Crocq, 2015). Indeed, many of the treatments for what the ancients referred to as *molestia* (affliction) are much of the basis of our therapies today such as cognitive behavioral therapy (CBT).

In the 18th century, anxiety symptoms were often lumped together with symptoms of melancholy (depression) and were not treated as a separate illness. It was not until the 19th century that anxiety emerged as a diagnosis of its own (Crocq, 2015). Referred to as *neuroses* or *neurasthenia*, symptoms included anything from panic and hysteria to phobias and depression. With the creation of the *Diagnostic and Statistical Manual* (DSM) in 1952, psychoneurotic disorders were classified with the chief symptom—anxiety (Crocq, 2015). The current *Diagnostic and Statistical Manual V* (DSMV; APA, 2013) contains an entire chapter addressing anxiety disorders. In recent decades, treatments for anxiety consisted of a combination of some form of psychotherapy and a psychopharmacological agent such as a selective serotonin reuptake inhibitor (SSRI). Success rates of therapy and medication management of anxiety have historically been between 60-80% (Garakani et al., 2020).

Integrative Nursing Care

Integrative approaches in nursing have been evident since the profession's inception with Florence Nightingale leading the way by connecting the environment and the person in terms of healing and wellness (Kreitzer & Koithan, 2019). Nursing has traditionally considered the whole person rather than just the illness a person might be suffering from. Integrative care uses evidence from multiple sources including those from alternative/complementary health,

traditional psychopharmacological treatments, therapies and therapeutic relationships, and collaborative care across health care that focuses on treating the whole person (Kreitzer & Koithan, 2019).

Despite anxiety being a known ailment since ancient times, treatment for anxiety has primarily remained the same. Therapeutic treatments such as CBT, with co-occurring psychopharmacological treatment, remain the standard of care despite low rates of remission of symptoms; these treatment options can only be initiated by nurses with prescribing authority (Kreitzer & Koithan, 2019). Utilizing an integrative nursing approach to treat anxiety holds the potential to expand upon current treatments and increase remission rates in adults with anxiety.

Treatment Options for Adults with Anxiety

Despite the increased interest and research in integrative approaches, there are no standard practice protocols for the integrative management of adult anxiety. The field of integrative treatments was vast so there were limits on what was included in this literature review. The most common conventional clinical practices for the treatment of anxiety and alternative/complementary treatments with the highest levels of evidence were included in this review to evaluate if the evidence supported clinical practice. For organization of this literature review, evidence for each treatment was categorized and synthesized.

Concerns among providers regarding alternative/complementary treatments along with common sense practices were considered and addressed. It is estimated that over 21% of people in the United States use some type of herbs or supplements to help with various symptoms from pain management to depression and anxiety (Phutrakool & Pongpriul, 2022). With conventional medication, safety is assumed based on the government regulations for drug approval from the Federal Drug Administration (Curtis & Gaylord, 2005). However, safety concerns regarding

conventional treatment included drug errors, patient compliance, polypharmacy issues, drug to drug interactions that could account for serious health issues to include death, highlighting the assumed “safety” of conventional medications has many factors and is not as straightforward as some in the medical community might assume (Curtis & Gaylord, 2005).

Standard Pharmacological Treatments for Anxiety

DeMartini et al. (2019) reviewed standard treatments for anxiety disorders and determined that SSRIs such as Lexapro® (Escitalopram), Paxil® (Paroxetine), and Zoloft® (Sertraline) remained the first choice for pharmacological treatment of anxiety. The authors noted that side effects for this class of medications included nausea, insomnia, diarrhea, decreased sexual function and ability, weight gain, sedation, significant interactions with other medications, and possible cardiac problems in older adults with some SSRIs. Serotonin-norepinephrine reuptake inhibitors such as Effexor® (Venlafaxine) and Cymbalta®(Duloxetine) were also considered first-line treatments but they carried the risk of side effects such as weight gain, significant gastrointestinal distress, hypertension, and discontinuation syndrome. Serotonin-norepinephrine reuptake inhibitors might help reduce anxiety in those who have not achieved an adequate response with an SSRI (Bandelow et al., 2015; Stahl, 2021).

Second line medications included Buspirone®, a serotonin receptor partial agonist, benzodiazepines such as Xanax® (Alprazolam) and Ativan® (Lorazepam), and anticonvulsants such as Lyrica® (Pregabalin) and Gabapentin® (Neurontin; Bandelow et al., 2015). Buspirone® could cause significant side effects such as dizziness and insomnia, whereas benzodiazepines could cause dependency, memory issues, and dangerous withdrawals that could be life-threatening. Pregabalin, an anticonvulsant, should be avoided in patients with renal disease as side effects such as sedation, dizziness, and significant swelling in extremities could occur

(DeMartini et al., 2019). The anticonvulsant and nerve pain medication Gabapentin might also be used but has sedating qualities that some patients cannot tolerate (Stahl, 2021). Benzodiazepines reduce symptoms of anxiety and panic but the use of these medications as a chronic treatment could lead to dependency, tolerance issues, and dangerous withdrawal side effects (Bandelow et al., 2015).

Third-line medications included atypical antipsychotics such as Seroquel®(Quetiapine), antihistamines such as Vistaril® (Hydroxyzine), and TCAs such as Tofranil® (Imipramine; DeMartini et al., 2019). Antipsychotics carry several significant side effects including significant weight gain, an increase in cholesterol and blood sugar levels, extreme fatigue, and movement disorders such as extrapyramidal symptoms and tardive dyskinesia, which could be permanent and resembles an individual with Parkinson's disease. Blood work needs to be monitored to observe cholesterol and blood sugar levels. Stahl (2021) recommended that BMI and waist circumference be monitored every three months, then quarterly after six months, and possible nutrition and or weight management for weight gain caused by the medications.

Hydroxyzine is an antihistamine that has anxiolytic properties and is used mainly for acute anxiety with side effects including sedation, dry mouth, and problems with urination (DeMartini et al., 2019). Sedation could be quite common with hydroxyzine, which could be problematic and could limit its use, as well as a possibility of prolongation of QTC interval, which could lead to heart abnormalities (Stahl, 2021). Tricyclic antidepressants are an older antidepressant with antianxiety effects but carry significant side effects such as arrhythmias, constipation, vision difficulties, and extreme lethality with overdose (DeMartini et al., 2019). Beta-blockers such as Inderal® (Propranolol) can effectively treat acute anxiety but both Buspirone® and propranolol could carry side effects such as orthostatic hypertension, dizziness,

and dry mouth (Bandelow et al., 2015). While many of these treatments could be effective for some of the population, as discussed previously, side effects such as weight gain, sedation, sexual dysfunction, and blood level changes in cholesterol and glucose leave a gap for other treatments an integrative approach might fill.

Cognitive Behavioral Therapy

Standard practice guidelines for anxiety include a mix of psychopharmacology and psychotherapy (van Dis et al., 2020). Cognitive behavioral therapy is the most common non-pharmacologic therapy for anxiety (van Dis et al., 2020). A systematic review and meta-analysis from van Dis et al. (2020) analyzed the long-term effects of CBT in anxiety treatment. Sixty-nine randomized control trials with over 4,000 patients were evaluated. Some of the studies were of low quality; however, data regarding CBT long-term therapy showed efficacy for reduction in anxiety for up to 12 months following cessation of therapy (van Dis et al., 2020).

A literature review by Daitch (2018) regarding CBT found that although it was considered the "gold standard" therapy for anxiety, many studies found that after therapy had ended, 42-58% of patients reported they had maintained a consistently high level of functioning and cessation of anxiety symptoms. This mirrored the van Dis et al. (2020) study that only reviewed functioning at 12 months out but not on a long-term scale, warranting further investigation (Daitch, 2018). Cognitive behavioral therapy could be an effective tool in the treatment of anxiety; however, it does require a time commitment. Many therapists who offer CBT might not be covered by insurance, requiring the consumer to pay out of pocket, which could be a barrier to some for this treatment methodology. PsychologyToday (n.d.) reported that, on average, therapists who take insurance are a lower percentage due to low reimbursement costs from insurance companies, making it harder for them to run a viable practice taking insurance.

Exercise/Physical Activity

Exercise has long been a standard treatment for the reduction of anxiety symptoms. A meta-analysis review of 37 studies with over 42,000 participants showed that exercise could have a small to moderate effect on reducing anxiety and mood symptoms (Kligler et al., 2016). Another systematic review from Aylett et al. (2018) showed that exercise was indeed helpful in reducing anxiety symptoms. The authors found higher intensity exercise had more benefits for anxiety, but that before recommending exercise, patients should be evaluated on an individual basis to determine safety (Aylett et al., 2018). Since the benefits of physical activity have been linked to the prevention of chronic diseases such as cardiovascular disease and help with weight loss, adding exercise a patient could tolerate as a treatment for anxiety might also have a positive, whole person impact (Aylett et al., 2018). Aerobic exercise showed the most benefit with at least 30 minutes of aerobic exercise three to five times a week for the most relief of anxiety symptoms (Kligler et al., 2016).

Alternative/Complementary Treatment Options for Anxiety

Alternative/complementary medicine, including herbs, is not regulated in the same way as conventional medications. These are regulated as a "food" rather than a medicine so standardization among products could be problematic (Curtis & Gaylord, 2005). These products must prove to the Food and Drug Authority that they are expected to be safe (Curtis & Gaylord, 2005); however, they are not required to prove this safety in clinical trials such as conventional medicines. Pharmavite®, who distributes supplements under the name of Nature Made®, has become a trusted brand for consumers over the past 35 years.

The Nature Made brand is widely distributed and Pharmavite was the first supplement distributors to be certified under the United States Pharmacopeias Convention's (n.d.) *Dietary*

Supplement Verification Program. This program created standards and guidelines to ensure supplement safety and quality control; those that do not meet standards are not approved. The parent company of Pharmavite is the drug company Otsuka Pharmaceuticals Co. LTD, which makes many of the conventional medications providers use and might be more comfortable with prescribing (Bonakdar, 2010). Another way to help ensure safety and alleviate provider fears among supplements and herbs is through third-party organizations such as Consumerlab (2022) or Natural Medicines™ (n.d.) that do independent testing of products to ensure the purity, strength, and the product is what it says it is. They list the verified products on their websites and providers could pay a fee to subscribe to these websites. The federally funded NCCIH (2022) has a web page that anyone can access that lets the consumer know about any recalls, alerts, and advisories, as well as fact sheets for the use of supplements and herbs.

Ashwagandha

Ashwagandha or *Withania somnifera* is an herb originally grown in India (Consumerlab, 2022). A systematic review of clinical trials from 2010-to 2020 demonstrated a high level of safety and efficacy of ashwagandha while also highlighting its limitations (Borrás et al., 2021). This review found ashwagandha is among the top three supplements showing positive clinical trial results for anxiety and insomnia (Borrás et al., 2021). Lopresti et al. (2019) conducted a randomized, double-blind, placebo-controlled study, indicating ashwagandha lowered Hamilton Anxiety Scale scores by 41% compared to the placebo group. Doses of ashwagandha used in the studies ranged from 240mg two times a day to 300mg two times a day vs. placebo. Typical dosing for ashwagandha is 300mg to 600mg a day as recommended by a recent clinical guideline review of alternative/complementary evidence from The World Federation of Societies of Biological Psychiatry and Canadian Network for Mood and Anxiety Treatment Task Force

(Sarris et al., 2022). Overall, the studies on ashwagandha were of smaller size but the risk of side effects was shown to be very low to minimal. The volume of studies reviewed in the systematic reviews and meta-analysis also strengthened the evidence that ashwagandha could be efficacious in treating anxiety in adults while also demonstrating a high level of safety (Borrás et al., 2021; Lopresti et al., 2019).

Overall, the evidence suggested ashwagandha could be an effective and safe treatment for anxiety. Kuhn and Winston (2008) cited that with recommended use, ashwagandha did not demonstrate toxicity. Borrás et al. (2021), in an updated review of alternative/complementary treatments for insomnia and anxiety, found ashwagandha was among the top three supplements showing positive clinical trial results for anxiety and insomnia. Lopresti et al. (2019) showed a significant reduction (41%) in anxiety compared to the control group that showed a 21% reduction in anxiety on the Hamilton Anxiety Scale.

Typical dosing for ashwagandha in the studies in this literature review ranged from 480mg a day in two split doses to 1000mg daily for stress and anxiety (Borrás et al., 2021; Lopresti et al., 2019). The government-funded NCCIH showed dosing and precautions for ashwagandha uses on Medline Plus (2022), which is a reliable tool all clinicians can access; it can be used in the development of an online educational seminar along with the evidence included in this review and other peer reviewed, published books or articles.

Ashwagandha is considered safe to be taken daily in 12-week periods. Common side effects could include gastrointestinal symptoms; however, there have been rare reports of liver damage so those with reduction in liver function should be monitored and ashwagandha should be used with caution in this population. There are no know food interactions but providers need to know about any drug-to-drug interactions between ashwagandha and any conventional

medicines or other alternative/complementary treatments. Medline Plus (2022) suggested that anyone taking antidiabetics or antihypertensives monitor their blood sugar levels and blood pressures as ashwagandha might lower these and a reduction of medications might be warranted in consult with a primary care provider. Ashwagandha should also be used with caution in those taking thyroid replacement as it might increase thyroid hormones and doses of thyroid medications might need to be lowered. Ashwagandha could increase fatigue and slow breathing so it should be used with caution in those taking benzodiazepines and central nervous system depressants. Ashwagandha should not be used in someone who takes immunosuppressants as it might increase an immune response. As with most medications or supplements, it should be avoided during pregnancy or breast feeding and it might need to be stopped prior to a surgical procedure due to central nervous system depression (Borrás et al., 2021; Lopresti et al., 2019).

Magnesium

Magnesium is an essential vitamin and deficiency is common in the general population (Razzaque, 2018). Magnesium works with more than 600 enzymes and is the fourth most abundant nutrient in the body. It plays multiple roles in the body including skeletal, cardiovascular, and metabolic processes (Razzaque, 2018). A systematic review from Boyle et al. (2017) also found that magnesium could reduce anxiety with standard deviations ranging from 0.7 to 6.0 in the studies that looked specifically at anxiety. Of the eight studies reviewed in this meta-analysis, no significant adverse effects were noted; however, in many studies, magnesium was combined with B6 and or California poppy and only two of the studies used magnesium as monotherapy. This review did note that much of the existing evidence was of poor quality and higher-quality studies need to be done (Boyle et al., 2017). Noah et al. (2021) conducted a large, randomized control trial that found magnesium might improve anxiety and

depression symptoms without the augmentation of B6. Mean anxiety scores on the Depression Anxiety Stress Scale when comparing magnesium with B6 vs. magnesium alone showed a decrease from severe anxiety to mild near-normal anxiety levels (Noah et al., 2021). Multiple sources supported the use of magnesium 400mg daily to treat anxiety with the added benefit that most people are nutritionally deficient in this important vitamin (Boyle et al., 2017; Noah et al., 2021; Razzaque, 2018).

Valerian

Valerian is a plant native to several places including North America, Europe, and Asia. Valerian is often used for its anxiolytic and sedation properties to help with anxiety symptoms; it is supplied in capsule form and typically prescribed in divided doses of 150mg to 500mg a day (Kuhn & Winston, 2008). A systematic review from Borrás et al. (2021) found valerian has anxiolytic properties among both male and female adults. Among the 13 reviewed studies, the overall result of Valerian on anxiety was positive; however, more clinical studies should be conducted (Borrás et al., 2021). Another systematic review from Shinjyo et al. (2020) demonstrated that Valerian could also be used to treat anxiety. In eight studies with over 500 patients, valerian was shown to be safe. The authors postulated that inconsistent results from anxiety trials in the past might be due to inconsistencies in the quality of herbal extracts used. As stated previously, third-party websites that verify herbs and supplements are available to providers along with integrative certifications to help with guiding patients in obtaining high-quality and tested herbs and supplements.

Chamomile

Chamomile is derived from a flower in the Asteraceae family. For decades, this botanical has been safely used in tea for anxiety and sleep (Consumerlab, 2022). A large meta-analysis and

review found chamomile could be a safe and affordable option for treating anxiety (Hieu et al., 2019). Chamomile was used in multiple forms throughout the studies in the meta-analysis and all forms showed improvement in anxiety symptoms on multiple scales including Hamilton Anxiety Rating Scale, Generalized Anxiety Disorder Assessment-7, Beck Anxiety Inventory Scale, Psychological Well-being Score, and Clinical Global Impression Severity. Rycroft-Malone and Tsai (2018) conducted a systematic review of the literature and found that chamomile was efficacious in treating mild to moderate anxiety symptoms as well as being well-tolerated by most patients. Typical dosing for chamomile for anxiety is 300mg capsules four to six times a day (Kuhn & Winston, 2008).

L-Theanine

L-Theanine is a non-essential amino acid extract from green and black teas (Consumerlab, 2022). L-Theanine is often used for reduction of anxiety and improved focus and concentration. Findings from Hidese et al. (2019) indicated that L-theanine improved anxiety in adults. Scores on multiple scales including the Self Rating Depression Scale (SDS), the State Trait Anxiety Scale (STATI), and the Pittsburgh Sleep Quality Index (PSQI) showed a significant reduction in anxiety (Hidese et al., 2019). This study recorded no adverse effects. A double-blind placebo-controlled study by Sarris et al. (2019) found no difference between placebo and L-Theanine at doses of 450-900mg daily in reduction of anxiety symptoms on the Hamilton Anxiety Scale. For anxiety, the typical dosing for L-Theanine is 200mg before a stressful event (Consumberlabs, n.d.).

Omega-3

Omega-3 polyunsaturated fatty acids are essential nutrients mainly obtained through diet such as the ingestion of fish (Su et al., 2018). Typical dosing for omega-3 is 1 to 10 grams a day

in divided dosing (Kuhn & Winston, 2008). Despite widespread use of omega-3 supplementation in the psychiatric community for depression and anxiety, two large meta-analyses had conflicting data regarding efficacy in preventing anxiety symptoms. Deane et al. (2021) reviewed 31 trials from 2016 to 2019 but were unable to find any positive benefit in adding omega-3 supplementation for anxiety. Su et al. (2018) examined 19 studies and found omega-3 might help reduce general anxiety symptoms but further high-quality studies were needed (Su et al., 2018).

Passionflower

Passionflower is a vine plant native to many regions at tropical and non-tropical temperatures. For centuries, passionflower has been medicinally used for anxiety symptoms in tea and other forms. Typical dosing of the dried herb is one to two grams three times a day (Kuhn & Winston, 2008). Borrás et al. (2021) found passionflower could effectively treat anxiety. In the studies reviewed by Borrás et al. (2021), passionflower did indeed reduce anxiety if used at a consistent dose. A randomized control trial found that after a 12-week treatment course with dried herb passionflower, there was a significant decrease in anxiety symptoms with only three reports of fatigue as a potential side effect and an overall improvement in anxiety (Gibbert et al., 2017).

Meditation, Relaxation Therapy, and Biofeedback

Meditation has been a long-used practice in many cultures. There is no agreed-upon definition of meditation but it is generally defined as practices to induce states of self-awareness, relaxation, and harmony (Bandelow et al., 2015). Bandelow et al. (2015) found mindfulness-based meditation to have a higher effect size for reducing anxiety treatments compared to traditional CBT. Saeed et al. (2019) conducted a large review of multiple meta-analyses and systematic reviews and found mindfulness-based meditation could improve anxiety symptoms.

While the effect of mindfulness-based meditation is not dependent on the number of sessions, there is sustained improvement in anxiety symptoms with using meditation for an average of 27 weeks. There was no evidence by Bandelow et al. (2015) or Saeed et al. (2019) that meditation could be harmful. Therefore, it could be recommended as a possible effective tool for anxiety reduction in adults.

Meditation has been a long-used practice in many cultures. Bandelow et al. (2015) found meditation had a higher effect size for reducing anxiety treatments compared to traditional CBT. There are many types of meditation but all have certain elements in common. A patient needs a quiet place, free of distractions where one can feel comfortable and focus attention on body-based functions, such as breathing, to help center and calm the mind to reduce anxiety and stress (NCCIH, 2022). Saeed et al. (2019) recommended mindfulness-based meditation could be used as adjunctive treatment or in mild cases a stand-alone treatment for reducing anxiety. Kreitzer and Koithan (2014) observed that meditation worked for reducing stress and anxiety by allowing the mind to be aware of conscious thoughts and/or more aware of physical responses to anxiety, which could reduce symptoms simply by recognition within.

Mindfulness-based meditations include being rooted in the moment and viewing self and feelings in a non-judgmental manner to increase comfort and gain experience to improve anxiety symptoms (Kreitzer & Koithan, 2014). Mind-body therapies such as meditation are included in every tier of the Anxiety Tier Table as adjunctive treatment to anxiety (Kreitzer & Koithan, 2014). Saeed et al. (2019) reviewed meta-analysis, randomized control trials and systematic reviews that demonstrated that mindfulness-based meditation practices could be used daily with no harm to patients over years. Daily meditation could be safely added to conventional and or alternative/complementary treatments to enhance and increase efficacy of those treatments

(Saeed et al., 2019). Bystrisky et al. (2022) recommended mindfulness-based meditation to relieve anxiety as they were likely to be beneficial with no harm to clients.

No prescribed length of time is recommended for mindfulness-based meditation; instead, it is based on client comfort and reduction in anxiety symptoms. Generally, this individual, safe practice could expand and grow with time and practice. Clinicians could help guide clients by providing them with basic skills such as deep breathing, focusing attention within, letting go of outside distractions, and being non-judgmental and open while practicing these skills (Bystrisky et al., 2022).

Relaxation therapy can be viewed as another method of meditation. Relaxation therapies are varied and include things such as progressive muscular relaxation and mindfulness-based therapy. The overall goal for all relaxation therapies is to use relaxation to achieve a state of anxiety relief. A large systematic review and meta-analysis found that implementing relaxation therapy could be a valuable strategy for reducing anxiety (Kim & Kim, 2018). Bandelow et al. (2015) found relaxation therapies were more effective than individual or group therapies typically used in the treatment of anxiety. Due to the low risk of side effects, meditation and relaxation therapy could be used as adjuncts with pharmacological, therapeutic, and/or supplemental treatments, making both a safe and effective recommendation for the reduction of adult anxiety.

Biofeedback is a form of stress reduction through regulation of certain biological measures such as heart rate or breathing (Goessl et al., 2017). Biofeedback is a way to train an individual to notice involuntary processes and to control or manipulate these processes through focus and calming techniques to reduce anxiety and create a sense of calm (Goessl et al., 2017). A meta-analysis from Goessl et al. (2017) indicated biofeedback might help to reduce anxiety

and stress (Hedges g =0.81). Another randomized control trial-tested biofeedback techniques on adults at a university to look at the efficaciousness of utilizing this method to help with stress and anxiety students experience in academia. The study found a six-week course of training and biofeedback reduced anxiety and improved academic success (Arizteca et al., 2017).

In conclusion, evidence suggested patients could use any or all these meditation techniques to help with reduction in anxiety symptoms. In mindfulness-based practices, there was no evidence of harm and all three interventions could be implemented by a patient in their own setting or under the supervision of a healthcare provider to possibly reduce anxiety symptoms.

Marijuana

Legalization of marijuana in the United States as of the writing of this document included 19 states; Washington. D.C., and Guam (Hansen et al., 2022). Since the legalization of marijuana, studies have been ongoing in relation to benefits of use. Marijuana and research in its use with anxiety are ongoing and as such, it was not included as a treatment method for this pilot project. In the book *Marijuana and Mental Health* by Michael T Compton (2016), a significant number of studies showed no positive increase in anxiety and anxiety related symptoms to warrant its use. As further studies are created and reported, this might change in the future. However, marijuana treatment for anxiety needs continued research before recommendations can be made with its use in the adult population with anxiety.

Synthesis

Anxiety is a global concern and the number of adults with anxiety is expected to climb in the coming years (CDC, 2022). Standard practice for anxiety affords some relief with medications such as SSRIs and therapies such as CBT and exercise (Aylett et al., 2018;

Bandelow et al., 2015; Daitch, 2018; DeMartini et al., 2019; Kligler et al., 2016; van Dis et al., 2020). Exercise is also an easy and beneficial recommendation to reduce anxiety and improve overall health (Aylett et al., 2018; Kligler et al., 2016). Standard pharmacological treatments such as SSRIs, SNRIs, and CBT are recommended as part of an integrative approach to treatment options. Benzodiazepines should be utilized with caution and be reserved for as-needed use for panic attacks and or quality of life issues if other therapies are not successful. Buspirone and propranolol could also be recommended for anxiety-relieving properties (Bandelow et al., 2015; DeMartini et al., 2019; Stahl, 2021).

However, many of these standard treatments were less effective than desired to relieve anxiety and might exhibit side effects some patients found intolerable. A literature review suggested an integrative treatment approach for adults with anxiety holds promise with some modalities having efficacy equal to standard treatments and with far fewer side effects. Ashwagandha, chamomile, magnesium, valerian, and passionflower could be recommended as treatments based on evidence of efficacy and low levels of reported adverse effects (Borrás et al., 2021; Boyle et al., 2017; Gibbert et al., 2017; Hieu et al., 2019; Lopresti et al., 2019; Noah et al., 2021; Rycroft-Malone & Tsai, 2018; Shinjyo et al., 2020). Meditation, biofeedback, and relaxation could be recommended based on the evidence of no known adverse effects and the benefit of reduction in anxiety symptoms (Arizteca et al., 2017; Bandelow et al., 2015; Goessl et al., 2017; Kim & Kim, 2018; Saeed et al., 2019). L-Theanine (Hidese et al., 2019; Sarris et al., 2019) and omega-3 polyunsaturated fatty acids (Deane et al., 2021; Su et al., 2018) were often used for the treatment of anxiety but were not sufficiently supported by the evidence to warrant recommendation. Chamomile and magnesium could benefit from higher-quality studies to determine their use as an integrative approach to treatment of anxiety as they demonstrated

relatively low rate of side effects but their efficacy has yet to be determined. Chamomile has been used and recognized as a beneficial herb for decades, while magnesium is an essential vitamin deficient in much of the adult population (Hieu et al., 2019; Rycroft-Malone & Tsai, 2018).

Overall, the evidence suggested conventional methods alone were not enough to alleviate symptoms of adult anxiety (Garakani et al., 2020). By blending conventional and alternative/ complementary methods (the basis of integrative care) and offering a wider range of treatments to a diverse adult population with anxiety, it is possible more adults would find relief from anxiety symptoms. Integrative care embraces the complexity and nature of the human being to promote wellness and a whole-person approach to treating anxiety (Kreitzer & Koithan, 2019). Many mental health providers have not been educated on use of these treatment options and might have hesitancy in prescribing these to patients with anxiety (Arizteca et al., 2017; Aylett et al., 2018; Bandelow et al., 2015; Borrás et al., 2021; Boyle et al., 2017; Daitch, 2018; Deane et al., 2021; DeMartini et al., 2019; Garakani et al., 2020; Gibbert et al., 2017; Goessl et al., 2017; Hidese et al., 2019; Hieu et al., 2019; Kim & Kim, 2018; Kligler et al., 2016; Kreitzer & Koithan, 2019; Lopresti et al., 2019; Noah et al., 2021; Rycroft-Malone & Tsai, 2018; Saeed et al., 2019; Sarris et al., 2019; Su et al., 2018; Shinjyo et al., 2020; van Dis et al., 2020).

Theoretical Framework

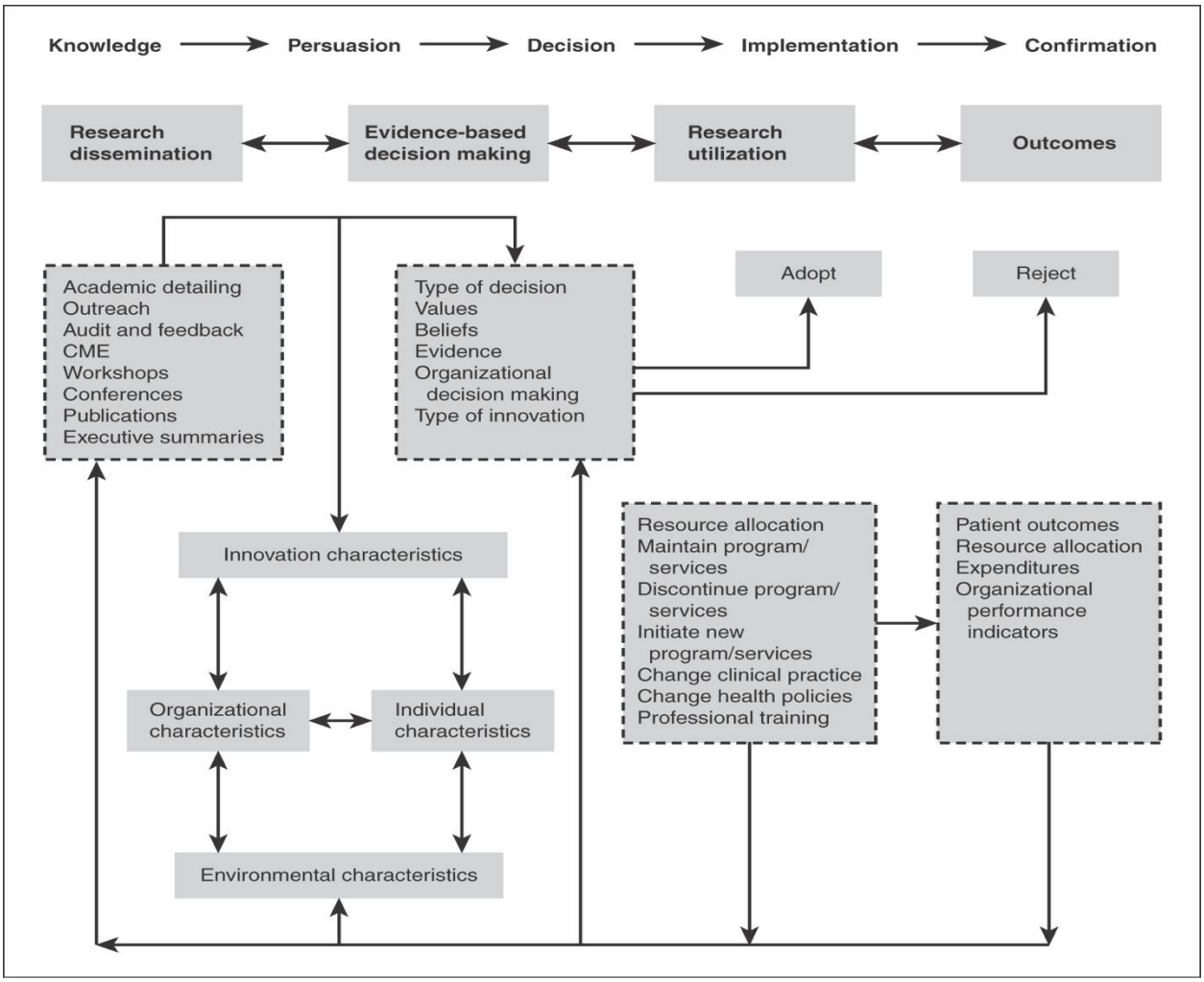
Maureen Dobbins' framework, the dissemination and use of research evidence for policy and practice (DUREPP), was developed in 2002 "to provide a guiding map to individuals and organizations in the health care field to assist them in achieving evidenced-based informed decision making" (Rycroft-Malone & Bucknall, 2010, p. 147). According to Dobbins et al. (2002), there have been significant delays in translating evidence to practice and this framework

attempts to address that process. The framework underwent updates in 2004 and 2005 (Dobbins, 2007; Rycroft-Malone & Bucknall, 2010). Using the underpinnings of Rogers' diffusion of innovation theory developed in the mid-1990s, Dobbin's framework addressed the delays in transitioning evidence into practice by implementing evidence-based research into practice in a timely manner (Rycroft-Malone & Bucknall, 2010).

Figure 1 displays a graphic representation of the five phases of this model including knowledge, persuasion, decision, implementation, and confirmation. Dobbins et al. (2002) acknowledged the development of this framework was based on the idea that the best evidence was not being consistently used in practice. As a nurse scientist, Dobbins (2007) created a model to address this deficiency. The framework expanded on Rogers' theory by creating a system and process to efficiently put best evidence into practice. Dobbins' framework creates a pathway for implementation to accelerate the process of evidenced-based research into practice (Rycroft-Malone & Bucknall, 2010). The framework has a flow that is logical and easily utilized to implement changes. Knowledge takes research that has been done and implementation of this research starts with the persuasion of the research and its use in the practice. When stakeholders have been identified, the decision to utilize the research has been made and the process starts. Implementation is the adoption of the research and evaluation over time if this research created a positive outcome. Confirmation looks at the findings of the adoption of this new modality and determine if a worthwhile change has been shown to have positive outcomes with its implementation (Dobbins, 2007; Rycroft-Malone & Bucknall, 2010).

Figure 1

Illustration of Dobbins' Model



*Note***.** Illustration of Dobbin's model. Permission is granted at no cost for use of content in master's thesis and/or doctoral dissertation (Dobbins et al., 2001).

Application to the Project

Phase 1

The first phase, knowledge, is the identification of the gap in clinical practice (Dobbins et al., 2002). For this scholarly project, the need for an online educational seminar of an integrative practice for the management of adults with anxiety was identified as a knowledge gap. This gap was discovered through conversations with the outpatient clinic's manager as a need for the

practice. Most providers in the practice do not hold an integrative certification and as such are not comfortable with recommending or addressing such alternative/complementary treatments as herbal supplementation or meditation practices. During the COVID-19 pandemic, this need became more apparent as many patients and most of the providers in the practice were unable to provide this information. In multiple supervision meetings, which are held bi-weekly, the lack of knowledge and training in alternative/complementary treatments was a recurrent theme. Feedback from clients reflected the desire for alternative/complementary treatments but lack of expertise by many of the providers in the practice led to these treatments not being utilized (Practice Owner, Psychiatric Mental Health Nurse Practitioner, personal communication, June 2021).

Phase 2

The second phase, persuasion, links the knowledge phase and the decision phase (Rycroft-Malone & Bucknall, 2010). Dobbins et al. (2002) stated that among the most effective dissemination techniques were the use of opinion leaders. Thus, the persuasion phase in this project included both discussion and surveying of organizational clinicians at the project site. Those with and without integrative knowledge were solicited to attend a voluntary online educational seminar. While multiple providers in practice hold an integrative nursing certification for psychiatry, others did not, so communicating the project's overarching goals and valuing the wide range of opinions was important for the project’s success.

Phase 3

The third phase, decision, and the fourth phase, implementation, were closely linked in this project. Because the online educational seminar consisted of various advanced practice nurses with a range of clinical practice expertise, disseminating current evidence to the panel

helped to increase their knowledge of alternative/complementary treatments for adults with anxiety that could be used in conjunction with conventional treatments, creating an integrative care approach (Rycroft-Malone & Bucknall, 2010). Dobbins et al. (2002) discussed the importance of the individuals within the organization becoming familiar and comfortable with the possible change and how those individuals' thoughts, feelings, and knowledge influenced their decision-making process. Thus, the third phase of the framework focused on furthering the knowledge and expertise of providers to gain confidence in prescribing alternative and complementary treatment options for patients with anxiety. In addition, the participants' attitudes and feelings about integrative approaches were assessed at the start and end of the project to gauge if their participation in the online educational seminar impacted their knowledge.

Phase 4

Phase 4, implementation, was closely linked to Phase 3 of this project is it focused on the development of the online educational seminar intended as a pilot for use as a template for additional seminars, utilizing alternative/complementary methods that blended with conventional methods of psychiatric treatments to create a more integrative method of practice in the future.

Phase 5

Phase 5, confirmation, was the last phase in the DUREPP, which focused on evaluation of the project outcomes (Rycroft-Malone & Bucknall, 2010). For this project, the online educational seminar was evaluated through conducting pre and post surveys on elements of the seminar important for prescribing alternative and complementary treatment options for anxiety. Additionally, a survey to evaluate provider's overall attitudes toward alternative and complementary treatment options was also conducted to evaluate for any global changes in provider's knowledge and attitudes in using alternative/complementary methods to treat anxiety

in the adult population. The results of the evaluation phase of the project are presented in Chapter IV.

Summary

The literature was reviewed and synthesized, and 23 articles were used in the development of this project. Ashwagandha, chamomile, magnesium, valerian, passionflower, meditation, biofeedback, relaxation, L-Theanine, omega-3 polyunsaturated fatty acids, chamomile and magnesium were all reviewed. The strongest evidence and recommendations included ashwagandha, meditation, chamomile, magnesium, valerian, passionflower, meditation, biofeedback and relaxation for the treatment of anxiety. L-Theanine and omega-3 polyunsaturated fatty acids did not have sufficient evidence to be recommended for use. Maureen Dobbins' framework (DUREPP) was chosen as the framework that helped to develop this quality improvement educational seminar pilot project. Dobbins et al. (as cited in Rycroft-Malone & Bucknall, 2010) looked to take best evidence and put it into practice. This project was about increasing knowledge, looking at provider attitudes toward integrative care, helping to put best evidence into practice, and the creation of a template for further educational seminars.

CHAPTER III

METHODOLOGY

Design

Anxiety is a complex mental health disorder that has effects on a global scale. Conventional treatment options are only partially effective and often come with significant side effects. Integrative approaches to treatment of anxiety include alternative/complementary treatment options that accompany conventional approaches but many mental health providers do not know enough of these options to be comfortable using them in their practice. To meet this need, this quality improvement project was developed that incorporated an educational seminar and pre/post examination of knowledge attainment and provider attitudes regarding knowledge and use of integrative medicine.

Setting

The setting for this quality improvement project was an outpatient mental health private practice in Denver, Colorado. This setting has 18 advanced practice psychiatric mental health nurse practitioners with varying degrees of experience in integrative care approaches for the management of adults with anxiety. This practice setting treats patients across the lifespan (ages 6 to 90+) with an entire scope of psychiatric illness including substance abuse disorders. Providers in this practice range in experience from 2 years to 30+ years. Several providers also carry other advanced practice certifications, which bring a vast amount of experience and skill sets to the practice.

Sample

The advanced practice providers were approached for participation in the pilot quality improvement project with an estimated sample size of 12-13. Recruitment consisted of emailing the advanced practice providers and outlining the DNP project and the role of the voluntary participant.

Inclusion criteria for the project were:

- Advanced practice providers employed in the identified outpatient mental health practice who volunteered to participate in an online educational seminar about alternative/complementary treatment methods for the treatment of adults with anxiety
- Two or more years of experience working as a psychiatric/mental health advanced practice provider.

Exclusion criteria were:

- Advanced practice providers with less than two years of experience working as a psychiatric provider
- A DNP scholarly project committee member

Mission and Vision of the Quality Improvement Project

The mission was to increase psychiatric mental health nurse practitioners' knowledge regarding two alternative/complementary treatments for adults with anxiety and to improve their attitude toward integrative treatment modalities.

The vision was to incorporate alternative/complementary modalities in the treatment of adults with anxiety for psychiatric mental health nurse practitioners in a private practice.

Project Objectives

1. Synthesize the current literature utilizing expertise from the integrative providers in an outpatient mental health private practice to develop an online educational seminar using two alternative/complementary treatments for the adult population with anxiety
    a. Determine two alternative/complementary treatment methods to present to advanced practice providers at the identified practice
    b. Conduct a literature review and synthesize the evidence
2. Develop and conduct an online educational seminar to be given to the advanced practice providers at the identified private practice
    a. Utilizing the expertise of the advanced practice providers and the literature review and synthesis conduct an online educational seminar at the identified private practice
3. Evaluate the advanced practice providers attitudes, receptivity, knowledge and understanding toward utilizing integrative treatment approaches for adults with anxiety before and after participation in the online educational seminar
    a. Development of the pre and post evaluation questionnaire consistent with Blooms taxonomy method of teaching and learning that would evaluate if the objectives of increasing knowledge and understanding toward utilizing integrative treatments approaches for adults with anxiety were met.
    b. The Integrative Medicine Attitude Questionnaire (IMAQ) would be distributed pre and post evaluation to measure if attitudes toward integrative practices changed as a result participation in the online educational seminar

c. The educational seminar, pre and post evaluation questionnaire, and IMAQ would be conducted online and independently

4. Develop a template for further educational seminars to increase and expand knowledge of integrative treatment methods.

   a. A template for continued educational expansion of alternative/ complementary would be based on the outcomes of this online educational seminar.

Project Plan

1. Obtain written permission from the project site to conduct the project with the relevant staff
2. Using the literature synthesis and expert opinion, create an education seminar for adults with anxiety using alternative/complementary treatment methods
3. Develop pre and post evaluations using Qualtrics software
4. Submit proposal for review and approval to doctoral scholarly project committee
5. Once approved by the doctoral scholarly project committee, submit the proposal to the University of Northern Colorado Institutional Review Board (IRB) for approval
6. Recruit participants for the online educational seminar and inclusion and exclusion criteria via email including soliciting consent to participate
7. The IMAQ questionnaire and pre and post evaluation are distributed to the participants one week before and one week after the online education seminar
8. Data from the pre and post evaluations would be analyzed using SPSS software
9. Dissemination of results.

Instrumentation

Integrative Medicine Attitude Questionnaire

The Integrative Medicine Attitude Questionnaire (IMAQ; see Appendix C) was used to measure advance practice providers' attitudes regarding use of alternative/complementary treatment options. The IMAQ is a 29-question reverse 7-point Likert scale with response choices including *absolutely disagree* (1) to *absolutely agree* (7). Item numbers 1, 2, 4, 6, 7, 8, 10, 11, 13, 17, 18, 25 and 27 were reverse coded. Example items included “healing is not possible when a disease is incurable” and “the spiritual beliefs and practices of patients play no important role in healing” (Schneider et al., 2003).

The IMAQ was created from a focus panel of faculty, fellows, visiting residents, and medical students at an integrative based university program. Attitudes were measured based on provider and students’ integrative medicine values as attitudes are critical to predicting how a provider would practice medicine (Schneider et al., 2003).

Previously, the questionnaire demonstrated good reliability and validity with a reported Cronbach’s alpha of .89 (Schneider et al., 2003). The IMAQ was also distributed along with the pre and post seminar evaluations to determine if the educational seminar led to a change in attitude toward the use of integrative treatment methods (Schneider et al., 2003).

Education Seminar Pre and Post Evaluation

Bloom’s taxonomy was used as a guideline to help in the development of the online educational seminar as well as the development of the pre and post evaluation questionnaire. Bloom’s taxonomy was originally developed in 1956 to create a “framework for learning,

teaching and educational achievement in which one level depends on the one below" (Persaud, 2021, p. 1).

Pre and post evaluations examined whether the educational seminar was effective in increasing knowledge among the providers at the private practice and identifying any needed revisions for the final template to be developed for further use of the practice. The evaluation was developed by this author and piloted for grammatical and content clarity by peer feedback from a pilot pre and post evaluation tests. The pre and post evaluations as well as the IMAQ were designed and distributed online using Qualtrics™ Survey Software and the seminar itself was conducted online. The final copy of the evaluation is provided in Appendix D.

Education Seminar

In consultation with expert integrative providers at the practice setting for this project, two treatments were chosen for this educational seminar. The complementary/alternative treatment options were chosen based on current evidence, efficacy of the modalities, and ease of implementation and learning of the treatment options. The seminar began with a rounded introduction into integrative therapies in general and then described the two chosen complementary/alternative therapies of ashwagandha and meditation.

Ashwagandha is a supplement that demonstrates efficacy for the treatment of adult anxiety; it is easy to use and straightforward to prescribe. Contraindications and side effects of ashwagandha use were explained and detailed in the seminar. Ashwagandha can be used safely in most cases. Coordination with primary care might be needed for clients who are treated for diabetes or hypertension. Ashwagandha can lower blood sugar and blood pressure and adjustments in pharmaceuticals might be appropriate. Those with thyroid disorders would also need primary care coordination as ashwagandha could cause an increase in thyroid levels.

Absolute contraindications included those taking immunosuppressants and pregnant or lactating cis-gender females. Ashwagandha might need to be held prior to surgical procedures (Kuhn & Winston, 2008).

Mindfulness-based meditation is something prescribers could easily learn to do and educate their clients for use at home or work that can help with the reduction of anxiety. Mindfulness-based meditation carries no risks. Due to the vast number of complementary/ alternative treatments available, only two options were chosen for the seminar to give participants an opportunity to assimilate the material for use in their current practice.

The educational seminar and objectives were developed to educate providers on the history of integrative medicine and how alternative/complementary treatments could be safe and effective with proper training and knowledge. The two chosen treatments were explored in the seminar in depth with supporting evidence as well as case study presentations to aid in appropriate use and precautions that should be considered when recommending these two treatments. Levels of evidence, as well as the how to recommend safe and reliable supplements, were part of the seminar as well. A certified workplace mindfulness facilitator provided a guided mindfulness-based meditation at the end of the seminar. Providers could easily learn and teach this meditation to clients and can be used in any setting. The seminar is included in Appendix E and provider handout is provided in Appendix F, both of which were created by this author.

The learning objectives for the seminar were:

- Identify two to three common integrative options for adults with anxiety
- Increase understanding and awareness of integrative care
- Identify ashwagandha and mindfulness meditation as integrative therapeutic options when caring for clients with anxiety

- Identify five contraindications and potential side effects of ashwagandha
- Report increased attitude toward use of alternative/complementary treatments

Analysis

The objectives for the analysis of this project were to determine if an online educational seminar could improve identification, increase awareness and knowledge of at least two alternative/complementary treatments, and increase attitudes toward integrative medicine. Collecting pre and post evaluation data assessed if this educational seminar was able to meet these objectives. Qualtrics software was used and data from pre and post evaluations as well as the IMAQ were exported into SPSS for data analysis.

Data analysis procedures for this project were as follows:

- Demographic data included age, gender, years of experience, certifications, and any formal integrative knowledge and training. The data were analyzed using descriptive statics to include percentages. Demographic data were only included in the pre evaluation
- Responses from the pre and post evaluations were exported from Qualtrics into SPSS and data were analyzed using mean and paired *t*-test to compare items 4, 5, 6, 8, 9, 10, 11, 12 for evaluation of learning objectives
- Nonparametric tests to include Wilcoxon Signed Rank test were used due to non-normal distribution of the data
- The IMAQ was analyzed using sum of all questions and a paired *t*-test analysis to compare pre and post seminar attitudes toward integrative medicine.

Duration

The first stage of this project consisted of the development of the online educational seminar using the relevant literature, creation of a pre and post evaluation questionnaire, accompanied by the IMAQ in Qualtrics, and defense of the proposal to the scholarly project committee. Submission to the IRB followed a successful proposal defense. This process was expected to take three to four weeks to complete. Upon approval from the IRB, recruitment of the participants in the online educational seminar began and was expected to take no more than 10 days. The next stage, a week prior to the seminar, the IMAQ and pre evaluation questionnaire were sent out. The panelists had one week after the pre evaluation questionnaire distribution before the online educational seminar was conducted. One week after the online educational seminar, the post evaluation as well as the IMAQ were distributed. The project chair and the primary investigator were estimated to need one to four weeks to review the data and report the data findings. The completion of the DNP scholarly write-up and a successful oral defense of the project were expected to take an additional four weeks. In total, this project was completed in 12-14 weeks.

Ethics

Permission from the project site (see Appendix G) and IRB approval (see Appendix H) were completed prior to beginning the DNP scholarly project implementation. Implied electronic consent was obtained from the participants with receipt of the pre evaluation questionnaire /IMAQ and the recruitment email (see Appendix I), which included information regarding participation, participant time commitment, and how their anonymous responses would be secured and utilized. All data were stored electronically on a password-protected and encrypted device. Consent to participate was voluntary and could be withdrawn at any time. Results were

only shared with the project research advisor using the university's secure servers throughout the course of the project. There were no anticipated risks for participants with this project other than a time commitment of 20-30 minutes pre and post evaluation questionnaires/IMAQ but benefits to the field of advanced practice nursing could include broader use and application of integrative treatment methods for clients from the creation of an online evidence-based educational seminar that might help expand treatment options for the adult population with anxiety in the outpatient setting.

Summary

The setting and sample of this DNP project were an outpatient psychiatric practice with recruiting of nurse practitioners in the practice. Sampling occurred at one facility after permission was obtained by the IRB. An online seminar was conducted and pre and post evaluations were used to determine if there were any changes in attitude and knowledge due to the seminar.

CHAPTER IV

RESULTS

Anxiety is a global health problem, which was exacerbated by the pandemic. This quality improvement pilot project was an online seminar conducted on September 18, 2022 to an outpatient psychiatric practice to determine if an educational seminar would help to increase provider knowledge with two integrative treatment techniques and determine if providers' attitudes regarding integrative care changed due to the online seminar.

Data Collection

Participants were recruited and consents were signed prior to the first round of evaluations delivered via Qualtrics. The pre seminar evaluation survey and IMAQ were sent one week prior to the education seminar (September 11, 2022) with a time of one week to complete. The seminar was conducted online on September 18, 2022. Post seminar evaluations and Qualtrics were sent one week post seminar (September 25, 2022) with one week to complete.

Data were imported from Qualtrics to Microsoft® EXCEL® spreadsheets for data analysis with IBM® SPSS software. Not all participants of this quality improvement pilot project completed all evaluations. Responses were presented to assess for changes in attitudes toward integrative treatment options and if there was a change in knowledge due to the online seminar intervention.

Participants

After IRB consent was obtained, participants were recruited via email. Participants were recruited from one practice site and consents were completed from those who were willing to

participate. No incentive was given to participate in this DNP project. Eleven participants consented to be included in the online educational program and participated in the pre seminar evaluation and IMAQ. Seven participants completed the post seminar evaluation and IMAQ. The evaluation sample size was as follows: pre seminar evaluation (n = 10), pre seminar IMAQ evaluation (n = 11), post seminar evaluation (n = 7), and post seminar IMAQ (n = 7). Reminder emails via Qualtrics were sent out three times during the week-long time frame to complete the evaluations. All the data collected from pre and post seminar evaluations and IMAQ are presented in this analysis.

Missing Data

Several missing data points were noted after data collection. No missing data procedures were completed and all missing data points were left missing. For inferential analysis of the IMAQ survey results, missing responses were excluded listwise. The two participants with previous integrative knowledge were also removed from the IMAQ analysis.

Pre Seminar Integrative Medicine Attitude Questionnaire Results

Demographics

All participants identified as female. Ages ranged from 31 to 70 with a mean age of 50.75 (SD = 11.91). All participants held psychiatric mental health nurse practitioner certifications with a range of years of clinical practice of 2 to 38 with a mean of 14.92 (SD = 12.74). Of the 11 participants of the pre seminar evaluation and IMAQ surveys, four identified having formal integrative training. Formal integrative training was defined as having prior training and experience in the use of integrative medicine.

Integrative Medicine Attitude Questionnaire Reliability Analysis

Integrative Medicine Attitude Questionnaire scale reliability was evaluated using Cronbach's alpha. Pre and post seminar IMAQ surveys demonstrated high levels of internal consistency (pre seminar $\alpha = .801$, post seminar IMAQ $\alpha = .862$).

Pre and Post Seminar Evaluation Data

Fourteen questions were in the pre and post seminar evaluations. A 7-point Likert Scale with 1 = *strongly disagree* and 7 = *strongly agree* was used for 12 of the questions and two were multiple answer. The pre seminar evaluation analyzed participants' knowledge of two integrative techniques, ashwagandha use and mindfulness meditation, as potential interventions in the treatment of anxiety (see Tables 1-4).

Table 1

Pre and Post Seminar Evaluation Data

Item		Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree	*M*
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(± *SD*)
1	Pre seminar (*n* = 11)	1	3	2	1	3	0	0	3.20 (± 1.48)
	Post seminar (*n* = 7)	0	3	2	1	1	0	0	3.00 (± 1.16)
2	Pre seminar (*n* = 11)	0	3	2	4	1	0	0	3.30 (± 1.06)
	Post seminar (*n* = 7)	0	3	2	1	1	0	0	3.00 (± 1.16)
3	Pre seminar (*n* = 11)	1	1	2	5	0	0	0	3.50 (± 1.35)
	Post seminar (*n* = 7)	1	0	2	4	0	0	0	3.29(± 1.13)
4	Pre seminar (*n* = 11)	0	1	3	0	0	5	1	5.40(± 1.35)
	Post seminar (*n* = 7)	0	0	0	0	2	1	4	6.29 (± 0.95)
5	Pre seminar (*n* = 11)	1	0	2	2	3	2	0	4.20 (± 1.55)
	Post seminar (*n* = 7)	0	0	0	1	2	4	0	5.43 (± 0.78)

Table 1 Continued

Item		Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)	*M* (± *SD*)
6	Pre seminar (*n* = 11)	0	2	1	2	3	2	0	4.20 (± 1.47)
	Post seminar (*n* = 7)	0	0	0	1	3	3	0	5.29 (± 0.75)
7	Pre seminar (*n* = 11)	0	1	1	1	4	2	1	4.80 (± 1.48)
	Post seminar (*n* = 7)	0	0	0	2	3	0	2	5.29 (± 1.25)
9	Pre seminar (*n* = 11)	2	2	1	4	1	0	0	3.00 (± 1.41)
	Post seminar (*n* = 7)	0	0	0	1	5	1	0	5.00 (± 0.57)
11	Pre seminar (*n* = 11)	0	1	2	0	5	2	0	4.50 (± 1.35)
	Post seminar (*n* = 7)	0	0	1	0	4	2	0	5.00 (± 1.00)
12	Pre seminar (*n* = 11)	2	3	1	0	3	1	0	3.20 (± 1.87)
	Post seminar (*n* = 7)	0	0	0	0	4	3	0	4.43 (± 0.54)
13	Pre seminar (*n* = 11)	1	5	2	1	0	0	1	3.40 (± 2.12)
	Post seminar (*n* = 7)	0	0	0	0	5	2	0	5.29 (± 0.49)
14	Pre seminar (*n* = 11)	2	4	1	3	0	0	0	2.90 (± 1.66)
	Post seminar (*n* = 7)	0	0	0	1	4	2	0	5.14 (± 0.69)

Table 2

Pre and Post Seminar Evaluation Data: Common Alternative and Complementary Treatment Options for Anxiety

Item		**Magnesium * (Y/N)**	**Electroconvulsive Therapy (ECT)* (Y/N)**	**Meditation* (Y/N)**	**Serotonin Receptor Uptake Inhibitors (SSRIs) (Y/N)**
8) Common alt/comp treatment options for adults with anxiety include	Pre seminar (*n* = 11)	8/2	8/2	10/0	2/8
	Post seminar (*n* = 7)	7/0	0/7	6/1	0/7

Note. All items denoted with * are correct treatment options.

Table 3

Pre and Post Seminar Evaluation Data: Ashwagandha Contraindications

Item		Someone with anxiety that has no medical concerns*	Someone who is on an SSRI*	Someone who is on immunosuppressant therapy	Someone who has a food allergy to nuts*
		(Y/N)	(Y/N)	(Y/N)	(Y/N)
10) Ashwagandha can be used safely in the following cases	Pre seminar (*n* = 11)	9/1	5/5	0/10	2/8
	Post seminar (*n* = 7)	7/0	7/0	0/7	3/4

Note. All items denoted with * are correct options.

Table 4

Pre and Post Integrative Medicine Attitude Questionnaire Scores

Item		Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree	*M*
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(± *SD*)
1 **RV*	Pre seminar (*n* = 11)	0	1	6	1	2	1	0	3.64 (± 1.21)
	Post seminar (*n* = 7)	0	1	2	2	0	2	0	4.00 (±1.53)
2 **RV*	Pre seminar (*n* = 11)	1	1	3	2	1	1	2	4.09 (± 1.97)
	Post seminar (*n* = 7)	0	0	2	3	0	1	1	4.43 (± 1.51)
3	Pre seminar (*n* = 11)	0	0	0	3	1	6	1	5.45 (± 1.04)
	Post seminar (*n* = 7)	0	0	0	1	2	2	2	5.71 (± 1.11)
4 **RV*	Pre seminar (*n* = 11)	0	0	2	5	2	1	1	4.45 (± 1.21)
	Post seminar (*n* = 7)	0	0	1	1	3	2	0	4.86 (± 1.07)
5	Pre seminar (*n* = 11)	0	2	1	2	5	1	0	4.18 (± 1.33)
	Post seminar (*n* = 7)	0	0	2	1	2	2	0	4.57 (± 1.27)

Table 4 Continued

Item		Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)	*M* (± *SD*)
6 **RV*	Pre seminar (*n* = 11)	2	0	3	0	0	5	1	4.91 (± 2.02)
	Post seminar (*n* = 7)	0	0	1	1	1	3	0	4.83 (± 1.60)
7 **RV*	Pre seminar (*n* = 11)	0	0	0	0	0	3	8	6.73 (± 0.47)
	Post seminar (*n* = 7)	0	0	0	0	1	2	4	6.43 (± 0.79)
8 **RV*	Pre seminar (*n* = 11)	0	0	0	4	0	5	2	5.45 (± 1.21)
	Post seminar (*n* = 7)	0	0	0	1	0	3	3	6.14 (± 1.07)
9	Pre seminar (*n* = 11)	0	0	0	6	0	3	2	5.09 (± 1.30)
	Post seminar (*n* = 7)	0	0	0	0	2	3	2	**6.00 (± 0.82)**
10 **RV*	Pre seminar (*n* = 11)	0	1	1	1	3	3	2	5.09 (± 1.58)
	Post seminar (*n* = 7)	0	2	0	2	1	2	0	4.14 (± 1.68)
11 **RV*	Pre seminar (*n* = 11)	0	0	0	0	4	3	4	6.00 (± 0.89)
	Post seminar (*n* = 7)	0	0	0	0	0	5	2	6.29 (± 0.49)

Table 4 Continued

Item		Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)	*M* (± *SD*)
12	Pre seminar (*n* = 11)	0	0	0	2	2	5	2	5.00 (± 1.34)
	Post seminar (*n* = 7)	0	0	0	1	0	5	1	6.29 (± 0.49)
13 **RV*	Pre seminar (*n* = 11)	0	1	0	3	1	6	0	5.64 (± 1.03)
	Post seminar (*n* = 7)	0	0	0	0	0	5	2	5.86 (± 0.90)
14	Pre seminar (*n* = 11)	0	0	0	3	6	1	1	5.00 (± 0.89)
	Post seminar (*n* = 7)	0	0	0	0	1	4	1	6.00 (± 0.63)
15	Pre seminar (*n* = 11)	0	0	0	1	6	0	4	6.18 (± 0.87)
	Post seminar (*n* = 7)	0	0	0	1	0	3	3	6.14 (± 1.07)
16	Pre seminar (*n* = 11)	0	0	0	4	3	3	1	5.09 (± 1.04)
	Post seminar (*n* = 7)	0	0	0	1	2	4	0	5.43 (± 0.79)
17 **RV*	Pre seminar (*n* = 11)	0	0	0	0	1	4	6	6.45 (± 0.69)
	Post seminar (*n* = 7)	0	0	0	0	1	1	5	6.57 (± 0.79)
18 **RV*	Pre seminar (*n* = 11)	0	0	0	4	1	4	2	5.36 (± 1.21)
	Post seminar (*n* = 7)	0	0	1	0	1	4	1	5.57 (± 1.27)

Table 4 Continued

Item		Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)	*M* (± *SD*)
19	Pre seminar (*n* = 11)	0	0	0	2	3	5	1	5.45 (± 0.93)
	Post seminar (*n* = 7)	0	0	0	3	2	1	1	5.00 (± 1.16)
20	Pre seminar (*n* = 11)	0	0	0	0	1	4	6	6.45 (± 0.689
	Post seminar (*n* = 7)	0	0	0	0	0	2	5	6.71 (± 0.49)
21	Pre seminar (*n* = 11)	0	0	0	1	2	6	2	5.82 (± 0.87)
	Post seminar (*n* = 7)	0	0	0	0	0	5	2	6.29 (± 0.49)
22	Pre seminar (*n* = 11)	0	0	0	1	4	3	3	5.73 (± 1.01)
	Post seminar (*n* = 7)	0	0	0	1	1	0	5	6.29 (± 1.25)
23	Pre seminar (*n* = 11)	0	0	0	2	2	6	1	5.55 (± 0.93)
	Post seminar (*n* = 7)	0	0	0	0	0	6	1	6.14 (± 0.38)
24	Pre seminar (*n* = 11)	0	0	0	0	5	5	1	5.64 (± 0.67)
	Post seminar (*n* = 7)	0	0	0	0	2	4	1	5.86 (± 0.69)

Table 4 Continued

Item		Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)	*M* (± *SD*)
25 **RV*	Pre seminar (*n* = 11)	0	0	0	4	2	4	1	5.18 (± 1.08)
	Post seminar (*n* = 7)	0	0	0	0	2	5	0	5.71 (± 0.49)
26	Pre seminar (*n* = 11)	0	0	0	3	2	5	1	5.36 (± 1.03)
	Post seminar (*n* = 7)	0	0	0	2	2	3	0	5.14 (± 0.90)
27 **RV*	Pre seminar (*n* = 11)	0	0	0	2	2	5	2	5.64 (± 1.03)
	Post seminar (*n* = 7)	0	0	0	0	1	6	0	5.86 (± 0.38)
28	Pre seminar (*n* = 11)	0	0	0	0	4	7	0	5.64 (± 0.51)
	Post seminar (*n* = 7)	0	0	0	1	0	6	0	5.71 (± 0.76)

Note: All items denoted with *RV are reverse coded for summative scores and inferential statistics.

Integrative Medicine Attitude Questionnaire Pre/Post Analysis

Inferential statistics were completed using IBM SPSS for the analysis for any difference in scores between the pre seminar and post seminar IMAQ surveys. The IMAQ data were tested for normality for a paired *t*-test. The results from histogram analysis and Kolmorokov-Smirnov results for the pre seminar IMAQ (p = 200) and post seminar IMAQ (p = 200) demonstrated non-normality of the differences in scores from the mean. Because the assumption of data normality was violated, a non-parametric, Wilcoxon Signed Rank Test was conducted to determine if a difference existed in median scores between the pre seminar IMAQ and post seminar IMAQ. The pre and post seminar paired *t*-test, pre seminar 154.00 (SD =6.640), and post seminar 159.75 (SD =6.98) p=.264 demonstrated no significant difference in scores.

Post Evaluation Quality Improvement Answers

The post evaluation asked respondents to state the answers to the following questions:

- What improvement could be added for this and future presentations? Responses included “None-this was a good presentation,” “Maybe longer and with more variety of uses,” “Other suggested integrative products!” and “More handouts that make bullet points to refer to.”
- What was the biggest take home point? Responses included “Truly good alternative treatment to anxiety,” “I like that we are looking for more ways to help with mental health than traditional western medicine,” “Complementary therapies are helpful,” “How to use Ashwagandha and to ask for help if needed when discussing best brands and other helpful points,” and “The strong research on the safety and efficacy of certain supplements for anxiety.”

Analysis of Study Questions

This DNP scholarly quality improvement pilot project addressed the following questions:

Q1 Will an educational seminar focused on integrative treatment options for anxiety improve mental health provider's awareness and knowledge regarding two common integrative treatment options for adults with anxiety (mindfulness meditation and ashwagandha)?

Q2 Will participation in the educational seminar on integrative treatment options for anxiety impact the attitudes and receptivity of mental health providers towards using integrative approaches in the future with adult patients seeking treatment for anxiety?

Analysis of data showed the educational seminar increased provider knowledge toward two integrative treatment options: ashwagandha and mindfulness meditation. Attitudes toward integrative treatment methods did not show a significant change pre and post educational seminar.

Summary

This quality improvement pilot seminar was conducted at a private outpatient psychiatry practice. Participants were asked to complete a pre and post evaluation for a general survey and the IMAQ. This quality improvement pilot seminar was conducted one week after pre evaluation. Post evaluation data were collected one week after the seminar and data from pre and post evaluations of the general survey and IMAQ were analyzed using IBM SPSS software.

CHAPTER V

DISCUSSION

The purpose of this DNP scholarly quality improvement pilot project was to develop and conduct an online educational seminar for the integrative treatment of adults with anxiety. This seminar was created from the synthesis of current evidence-based literature and practice expertise from other integrative providers in the practice location. The aim of this project was to evaluate if providers' attitudes, receptivity, knowledge, and understanding toward integrative treatment approaches increased after the online educational seminar and if this pilot project could be used for future practice educational seminars on integrative health techniques for mental illness.

Project Objectives

Project Objective 1

This objective was to synthesize current evidence and practice expertise from integrative providers in the outpatient mental health private practice to develop an online educational seminar of two alternative/complementary treatments for the adult population with anxiety.

To meet this objective, an extensive literature review of integrative treatment approaches in the treatment of adult anxiety was conducted and synthesized. Integrative providers in the practice were used to help to narrow down options into two evidence-based treatment techniques that would be presented to all the providers in an online educational seminar. Evaluation of the treatments were narrowed down based on two methods that would be valuable treatment options,

were straightforward, and had little to no side effects. The objective was met and set the stage for the other objectives of the project.

Project Objective 2

This objective was to develop and conduct an online educational seminar to be given to the advanced practice providers at the identified private practice.

An educational seminar was created based on the literature review and the seminar was conducted online on September 18, 2022 via Zoom after an initial invitation and consent to participate was sent to the potential participants on August 18, 2022. Pre seminar evaluations were sent out on September 11, 2022, with a time frame of one week to complete. After the online seminar was conducted, participants were sent another round of the same evaluations one week later (September 25, 2022) with another deadline of one week to complete. Post evaluations were completed on October 2, 2022 and data analysis on the evaluations began on October 3, 2022. Initially 11 providers agreed to participate in the evaluations and seminar and of those 11, seven completed both pre and post evaluations and the IMAQ. This objective was met and overall feedback on the presentation, delivery method, and content was overall positive, setting the stage for future integrative topic presentations.

Project Objective 3

This objective was to evaluate the advanced practice providers' attitudes, receptivity, knowledge and understanding toward utilizing integrative treatment approaches for adults with anxiety before and after participation in the online educational seminar

This project objective was met through a pre and post evaluation to assess for increase in providers' knowledge and attitude toward integrative treatments. The IMAQ was used to evaluate any changes in attitudes toward integrative treatments and the educational seminar

evaluation surveys were used to determine if there were changes in knowledge. The evaluation survey consisted of 14 questions with the initial survey identifying demographics to include a de-identified number system for confidentiality, age, gender, years of practice experience, and any prior integrative knowledge. The post seminar evaluation had the same de-identified number system and included two short answer questions to assess for provider feedback, constructive criticism, understanding, and knowledge gained from the presentation. Learning objectives for the survey and IMAQ are presented in greater detail later in this chapter. This objective furthered the mission of this DNP quality improvement pilot project: to increase psychiatric mental health nurse practitioners' knowledge regarding two alternative/complementary treatments for adults with anxiety and to improve psychiatric mental health nurse practitioners' attitudes toward integrative treatment modalities. Provider attitudes evaluated from the IMAQ did not show a positive or negative difference in provider attitude toward integrative treatment.

Project Objective 4

This objective was to develop a template for further educational seminars to increase and expand knowledge of integrative treatment methods.

Questions received post seminar were very positive and many providers asked not only for more information regarding what was presented during the seminar but other integrative treatment methods that could be used for mental health diagnosis beyond anxiety. The need for further educational seminars seemed to be something providers in the practice were wanting to continue. Some conversations regarding options for depression were a topic most asked for (Psychiatric mental health nurse practitioner participants in the quality improvement pilot project, personal communication, October 2022). The certified workplace mindfulness facilitator who presented during this seminar used this as an introduction for a workplace mindfulness

workshop she hosted weekly for one hour at lunch time for six weeks beginning October 27, 2022. This positive feedback led to the use of this pilot project as a template for future integrative care topics.

Seminar Learning Objectives

Seminar Learning Objective One

This objective was to identify two to three common integrative options for adults with anxiety. Question 8 on the pre and post evaluation survey asked participants to identify common alternative/complementary treatment options for adults with anxiety including magnesium, electroconvulsive therapy (ECT), meditation and SSRIs. The item was included to evaluate the general knowledge base of participants of alternative and complementary treatment options for patients with anxiety. Magnesium and meditation were correct responses as the question was presented as complementary/alternative options. Responses were noted on the pre and post seminar evaluation for most respondents: Pre seminar results (n = 10) documented that eight chose magnesium, eight chose ECT, all chose meditation, and two chose SSRIs. Post seminar results (n = 7) documented that all participants chose magnesium, no participants chose ECT, six chose meditation, and none chose SSRIs. This objective was met as the participants were able to choose the complementary/alternative options that were common integrative treatment options for adults. Electroconvulsive therapy was the third choice that could be seen as alternative and or traditional treatment so this might account for no one choosing this option. The objective was met as post seminar all chose magnesium and all but one chose meditation.

Seminar Learning Objective Two

This objective was to increase in understanding and awareness of integrative care. This objective was also intended to assess if provider comfort regarding integrative treatment methods

increased due to the educational seminar. Question 4 on the evaluation survey assessed this objective and was worded as “I understand what is meant by integrative care.” This question assessed to see if provider understanding of what was meant by integrative care increased. The pre seminar mean was 5.40 (*SD* = 1.35) and the post seminar mean increased to 6.29 (*SD* = .95).

Question 5—"I know how to apply integrative care in my practice when treating adult clients with anxiety” sought to assess if the seminar increased provider ability to apply integrative care in clients with adult anxiety if appropriate. The pre seminar mean was 4.20 (*SD* = 1.55) and the post seminar mean increased to 5.43 (*SD* = .78).

Question 6—"I do a good job of identifying adult clients with anxiety that may benefit from integrative care” was intended to assess if providers could better identify clients with anxiety that might benefit from integrative methods of care. The pre seminar mean was 4.20 (*SD* = 1.47) and the post seminar mean increased to 5.29 (*SD* = .75). This objective noted a small increase in mean that we could infer as a positive trend toward increasing knowledge and understanding of integrative care.

Seminar Learning Objective Three

This objective was to identify ashwagandha and mindfulness meditation as integrative therapeutic options when caring for clients with anxiety. Upon completion of the seminar, the post evaluation survey showed an increase in correct responses for items 9, 11, and 12, which were developed to assess for changes post seminar in the ability of participants to identify the use of ashwagandha and meditation for the treatment of anxiety and the overall comfort in prescribing these therapies. Survey item 9 increased from a mean of 3.00 (*SD* = 1.41) to 5.00 (*SD* = .57) post-survey. Additionally, for item 11, which focused on the comfort in recommending mindfulness meditation, the mean scores increased from pre seminar 4.5 (*SD* = 1.35) to 5.00 (*SD*

= 1.00) post seminar. Finally, item number 12, which evaluated participant's comfort in recommending Ashwagandha to patients with anxiety, increased in score from 3.2 (*SD* = 1.87) to 4.43 (*SD* = 0.54) post seminar.

Although inferential statistics were unable to be conducted for this analysis, the results demonstrated that the participants in this small pilot study showed a small increase in mean that we could infer as a trend toward increasing knowledge and understanding. It was noted that the comfort in instruction on meditation only rose slightly and was less than the other items. Question 10 was incorrectly added in the power point learning objectives as being part of this objective; however, this question was part of objective four.

Seminar Learning Objective Four

This objective was to identify five contraindications and potential side effects of ashwagandha. Question 10 on the pre and post evaluation survey asked participants to evaluate comfort and general knowledge in understanding safety in using ashwagandha. Responses were noted on the pre and post seminar evaluations for most respondents: Pre seminar results (*n* = 10) documented nine participants chose someone with anxiety who has no medical concerns, five chose someone on an SSRI/SNRI, none chose someone who was on an immunosuppressant, and two chose someone who had a food allergy to nuts. Post seminar results (*n* = 7), seven chose someone with no medical concerns, seven chose someone who was on an SSRI/SNRI, none chose someone who was on an immunosuppressant, and three chose someone who had a food allergy to nuts. Comfort in ability to identify safety and contraindications in use of ashwagandha for people with anxiety increased. Choice three, someone who was on immunosuppressants, was the incorrect answer and was not chosen pre or post evaluation. This objective was poorly worded; however, the question as presented to participants was clear as they were asked to

identify in which cases ashwagandha could be safely used and all were able to recognize that no one on immunosuppressants should be given anything without scrutiny and consultation with that person's medical team. This might be due to general nursing knowledge that someone on immunosuppressants is closely monitored and even integrative treatment methods must be used with scrutiny. Additional follow-up with the providers in the practice would be helpful to see why their comfort with this practice might be less than with the others or if additional questions or concerns arose after the seminar. This objective was met overall as participants were able to correctly identify who not to recommend ashwagandha.

Seminar Learning Objective Five

This objective was to report increased attitude toward use of alternative/complementary treatments. The IMAQ did not demonstrate any significant changes pre and post seminar. Of the survey's 28 questions, only questions 11, 14, 15 and 22 demonstrated an increase in scores correlating with an improvement in attitude toward use of alternative/complementary treatment options. No other changes in item scores were noted. The overall survey scores also did not significantly change pre and post seminar paired *t*-test, pre seminar 154.00 (*SD* =6.640), and post seminar 159.75 (*SD* =6.98) *p*=.264.

Conclusions

This pilot project seminar, while not being statistically significant due to the small sample size and inability to run inferential statistics, did have a small increase in mean that we could infer as a trend toward increasing knowledge and did have clinical relevance in achieving the goals of providers showing a positive trend toward the increase in knowledge for the two integrative treatments: ashwagandha and meditation. Provider take-home comments showed an overall positive reception to this online seminar and its contents. Providers' attitudes toward

integrative medicine did not demonstrate any significant changes pre and post seminar as measured by the IMAQ. While it was hoped the providers with no integrative training would have a change in scoring regarding attitude, overall scoring showed most of the providers generally identified with integrative treatment methods. This could be due to the nature of psychiatry and the underpinnings of the therapeutic relationship developed with clients during treatment.

Limitations

There were several limitations to this project. The most significant limitation was the small sample size in this quality improvement pilot project. Recruitment for this DNP project was specific to one practice site, which limited diversity of providers. Unfortunately, the recruitment for this DNP quality improvement pilot coincided with the implementation of a new electronic health record in the practice. This might have hindered participation, particularly in the post evaluation surveys, as the new electronic health record was implemented the same week the evaluations were to be completed post seminar. Staff reported a high level of stress and anxiety with many stating they felt overwhelmed due to the implementation of the new process at the worksite, which possibly accounted for the reduced post seminar participation.

Recommendations for Research

Further research needs to be conducted regarding the evaluation of an increase in knowledge and attitude toward integrative treatments from educational seminars. This seminar was conducted online; future research might include a comparison between online and in person seminars to validate if one modality was superior to the other. Research regarding other integrative methods of care based on current evidence-based literature and disseminated through educational seminars should also be considered and evaluated to effectively conclude if this

method of knowledge dissemination would be a continued useful resource. The IMAQ to evaluate provider attitudes toward integrative treatment might be used in settings other than psychiatry to evaluate if a change in attitude was seen in other disciplines.

Recommendations for Practice

Educational seminars for integrative treatment methods are a viable option to help increase provider knowledge of integrative treatment methods in psychiatry. Educational seminars do not require extensive time or commitment for the attendees but the knowledge and practice tools gained from these seminars might be invaluable tools to help with the treatment of mental illness. Further pilot seminars could be disseminated to other psychiatry practice and hopefully to primary care and other disciplines to continue to spread knowledge and awareness of integrative medicine techniques. As more practices adopt this method of evidence-based knowledge dissemination, it is hoped that more effective treatments for mental illness will continue to relieve the global burden of mental illness.

Reflection

Five criteria must be met to achieve the rigor of excellence necessary to meet the *Essentials* of the American Association of Colleges of Nursing (2006): Enhance, Culmination, Partnerships, Implements, and Evaluation (EC as PIE; Waldrop et al., 2014). This DNP scholarly project met the EC as PIE criteria as follows:

Enhance

The goal of this DNP project was enhancement of knowledge of providers in a small outpatient psychiatric practice by highlighting two integrative measures to help in the treatment of anxiety in the adult population. This project has the potential to help clients in the community have less anxiety, better health outcomes, and quality of life. This project also has the capacity to

enhance provider knowledge to broaden the scope of treatment for those who do not respond or have minimal response to traditional treatment methods (Waldrop et al., 2014).

Culmination

The literature review demonstrated a gap in practice between integrative treatments and implementation of those treatments. An extensive literature review, based on provider and client feedback, was done and an educational seminar was built upon this research and feedback. This DNP project was designed as a quality improvement pilot project intended to further the education of integrative treatments. It was intended to be sustainable for the foreseeable future with the goal of continuous knowledge enhancement for the providers with benefit to the clients (Waldrop et al., 2014).

Partnerships

Stakeholders in this project were the providers of the outpatient psychiatric practice as well as adult clients with anxiety seeking other treatment options for treatment. This project utilized an extensive literature review and consultation with providers in the practice who had integrative knowledge to narrow down two integrative techniques to be presented to the practice. Knowledge of integrative medicine ranged from very minimal to more extensive (Waldrop et al., 2014).

Implements

Learning objectives were developed to identify if there were positive increases in knowledge and comfort with the use of two integrative techniques. With the global COVID-19 pandemic, this project was timely as an increase in anxiety has been seen worldwide and providers and clients in the practice expressed a greater need for a broader number of treatments

for anxiety. This project was a pilot for future educational seminars for integrative medicine and is hoped to continue to address a wider range of mental health diseases (Waldrop et al., 2014).

Evaluation

This DNP project was conducted as a pilot for continuing education within the practice. This project was designed to help enhance provider knowledge, leading to a more robust treatment option for adults with anxiety who do not benefit from traditional treatment methods. Although this study did not yield the intended outcomes in increasing provider attitude, provider knowledge of two integrative treatments, ashwagandha and mindfulness meditation, was increased. Continued long-term evaluation of further studies would be needed to assess the true impact of this DNP pilot project with this project serving as a template by utilizing the positive and negative data to create more effective seminars over time (Waldrop et al., 2014)

Summary

Anxiety is a global disease that affects a broad number of individuals, which could lead to a loss of income, decrease in life satisfaction, and could lead to depression and or suicide. Current anxiety treatments are not effective for everyone and other methods of care should be considered to help improve outcomes. Development of an educational seminar outlining two integrative methods of treatment has the capacity to improve client outcomes and enhance practice for providers by broadening their scope of available treatments based in evidence. This DNP quality improvement pilot project was successful in the creation of an educational seminar, which is hoped to be a pilot for future seminars that could continue to aid in the treatment for those suffering from mental illness. Much can be learned from the negative outcomes, as well as the positive outcomes, to continue to expand provider knowledge of integrative care.

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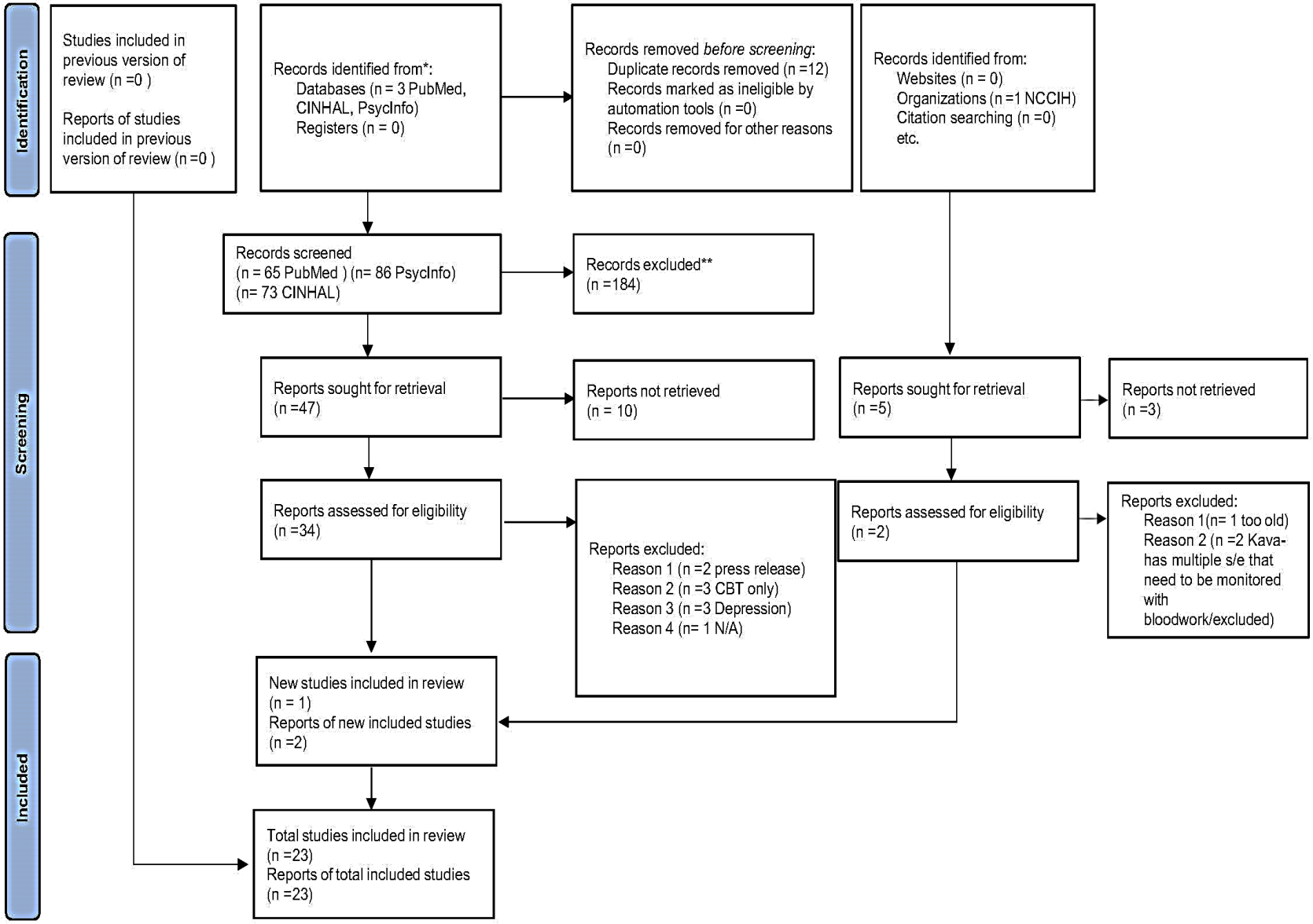
APPENDIX A

PREFERRED REPORTING ITEMS FOR SYSTEMATIC REVIEWS AND META-ANALYSES (PRISMA) DIAGRAM


Identification
Studies included in previous version of review (n =0)
Reports of studies included in previous version of review (n =0)
Records identified from*:
Databases (n = 3 PubMed, CINHAL, PsycInfo)
Registers (n = 0)
Records removed *before screening*:
Duplicate records removed (n =12)
Records marked as ineligible by automation tools (n =0)
Records removed for other reasons (n =0)
Records identified from:
Websites (n = 0)
Organizations (n =1 NCCIH)
Citation searching (n =0)
etc.
Screening
Records screened
(n = 65 PubMed) (n= 86 PsycInfo)
(n= 73 CINHAL)
Records excluded**
(n =184)
Reports sought for retrieval
(n =47)
Reports not retrieved
(n = 10)
Reports sought for retrieval
(n =5)
Reports not retrieved
(n =3)
Reports assessed for eligibility
(n =34)
Reports excluded:
Reason 1 (n =2 press release)
Reason 2 (n =3 CBT only)
Reason 3 (n =3 Depression)
Reason 4 (n= 1 N/A)
Reports assessed for eligibility
(n =2)
Reports excluded:
Reason 1(n= 1 too old)
Reason 2 (n =2 Kava-has multiple s/e that need to be monitored with bloodwork/excluded)
Included
New studies included in review
(n = 1)
Reports of new included studies
(n =2)
Total studies included in review
(n =23)
Reports of total included studies
(n =23)

APPENDIX B

TABLE OF EVIDENCE

Table B.1

Table of Evidence

Author	Purpose/Theory	Design	Setting/Sample	Survey/Instruments	Findings	Implications for DNP Practice/Limitations
Aylett et al., 2018	How exercise affects anxiety No theory framework identified	Systematic-Review and Meta-Analysis Level of Evidence I	Setting -Mixed Sample 15 studies only RCTS used N=695 Searches done in CENTRAL, MEDLINE and EMBASE	DSM V criteria for any anxiety disorder is met Adults over the age of 18	Exercise does have efficacy in treating anxiety over waitlist methods (CI 95% -0.41) and high intensity exercise has an even higher effect on relieving symptoms of anxiety (CI 95%-0.38)	Exercise has long been a standard recommendation for treatment of anxiety symptoms This study shows exercise in all forms is efficacious, with higher intensity workouts giving an even greater anxiolytic effect Limitations Further studies with exercise for specific anxiety disorders as well as intensity of exercise in reduction in anxiety
Arizteca et al., 2017	Measuring anxiety reduction from biofeedback in an academic setting and its effects on academic performance No theory framework identified	Experimental study with control group Level of Evidence III	Setting - Undergraduates at the University of the Basque Country Sample N=233	t-test Pre and Post exam scores measured	Biofeedback did show an improvement in academic performance and overall reduction in anxiety	Biofeedback showed promise in helping with anxiety relief and overall increase in academic performance This study had no adverse events and may be helpful in reducing anxiety symptoms and increasing performance Limitations Longer studies with more training time in biofeedback as well as separating anxiety from performance

Table B.1 Continued

Author	Purpose/Theory	Design	Setting/Sample	Survey/Instruments	Findings	Implications for DNP Practice/Limitations
Bandelow et al., 2015	Comparing treatments for anxiety for efficacy Standard treatments were compared through a meta-analysis to include medications and therapies No theory framework identified	Meta-Analysis Level of Evidence I Random effects model used to account for heterogeneity in the studies	Setting -Outpatient Sample RCTs N=37,333 234 RCTs Searches done in: Medline, ISI web of science, PubMed	Hamilton Anxiety Scale (HAM-A) for Generalized Anxiety Disorder (GAD) and panic disorder with or without agoraphobia (PDA) Liebowitz Social Anxiety Scale (LSAS) for Social Anxiety Disorder (SAD)	Medications showed greater efficacy in anxiety reduction then psychotherapies among the studies Mindfulness and meditation showed more efficacy than CBT either in groups or individuals Some SSRIs performed better than others although all were more effective in treating anxiety than the placebo	Gold standard evidence-based treatments for anxiety This study compared therapy and medications in RCTs Limitations that the authors found related to publication bias in both the drug and the psychotherapy studies Drug study data were shorter length of time than psychotherapy studies (4 weeks compared to 12 weeks average)

Table B.1 Continued

Author	Purpose/Theory	Design	Setting/Sample	Survey/Instruments	Findings	Implications for DNP Practice/Limitations
Borrás et al., 2021	Comparing complementary therapies used for sleep and anxiety No theory framework identified	Systematic-Review Level of Evidence I	Setting -Outpatient Sample-Clinical Trials Searches done in: PubMed, Scopus and Cochrane Library Research on 23 plants and herbs	Beck Anxiety Inventory, Beck Depression Inventory, Bf-S, Defined Intensity Stressor Simulation, Hamilton Anxiety Rating Scale, International Classification of Sleep Disorders, Insomnia Severity Index, Leeds Sleep Evaluation Questionnaire, Menopause-Specific Quality Of Life Questionnaire, Pittsburgh Sleep Quality Index, St. Mary's Hospital Sleep Questionnaire, Speilberger State-Trait Anxiety Inventory, Visual Analogue Scale	3 plants were concluded as being efficacious in sleep and anxiety: valerian, passionflower and ashwagandha, with ashwagandha being the weakest of the 3	Ashwagandha may be effective against symptoms of anxiety Valerian with hops and passionflower were the best producers of clinical results of anxiety and insomnia in the clinical trials Limitations include low quality studies
Boyle et al., 2017	Looking at how supplementing with magnesium can affect anxiety and stress No theory framework identified	Systematic-Review Level of Evidence I	Setting -Outpatient Sample 18 studies N=975 Searches done in: OVID Medline, CINHAL, EMBASE, PsycInfo and grey literature	Hamilton Anxiety Scale (HAM-A), Moos Menstrual Distress Questionnaire (MDQ), Speilberger State Trait Anxiety Scale (STAI) Doses of magnesium ranged from 46.4-600mg	Reduction in HAM-A scores in most studies Efficacy compared to Buspirone in one study showed no difference between the two	Magnesium showed efficacy in treating anxiety as well as PMS symptoms and post-partum anxiety Limitation: No clear dosage range was established in the studies for treatment

Table B.1 Continued

Author	Purpose/Theory	Design	Setting/Sample	Survey/Instruments	Findings	Implications for DNP Practice/Limitations
Daitch, 2018	Looking at multiple methods and how they work for anxiety reduction to include Cognitive Behavioral Therapy, Mindfulness and Hypnosis	Case Study Level of Evidence IV	Setting -Outpatient Sample -1	Mindfulness, Hypnosis and CBT were introduced by the author over the course of one 60-minute session	Client was able to recognize stressors and was able to let her son attend public-school, main source of stressors On subsequent follow ups reported that client continued to improve and report lessening anxiety symptoms	Small case study, but helpful in demonstrating that integrative treatment approaches did help to alleviate anxiety in one client as opposed to the talk only therapy that she had been participating in Limitations Needing larger studies with multiple participant
Deane et al., 2019	To determine efficacy of Omega-3's in treatment of depression and anxiety No theory framework identified	Systematic-Review and Meta-Analysis Level of Evidence I	Setting -Outpatient Sample N=41,470 for Omega'3's N=4837 alpha-linolenic acid N=4997 poly unsaturated fat Adult participants over age 18 Searches done in: Central, Medline, EMBASE	Center For Epidemiological Studies Depression Scale, Beck Depression Inventory II, General Health Questionnaire, Geriatric Depression Scale	Review showed that many people take omega-3 supplements to improve mental health Effects on supplementation show little to no effect on preventing anxiety or depression symptoms in the adult population	Most studies showed low to no risk of bias Large review and meta-analysis comparing many studies, those with low level and higher-level evidence Limitations include low quality studies and lack of standardization across the studies
DeMartini, 2022	Treatment guidelines for anxiety in internal medicine	Treatment guidelines from the American College of Physicians for primary care providers Level of Evidence I	Setting-Treatment guidelines Sample- review of literature from the American College of Physicians for primary care	Generalized Anxiety Disorder-4 Item Scale, Generalized Anxiety Disorder-7 Item Scale, Patient Health Questionnaire 4	List of standard treatment therapies and medications with proven evidence such as Cognitive Behavioral Therapy (CBT), SSRIs, SNRIs and benzodiazepines	Standard treatment for treatment of anxiety from a treatment guideline Limitations Only conventional treatments were addressed

Table B.1 Continued

Author	Purpose/Theory	Design	Setting/Sample	Survey/Instruments	Findings	Implications for DNP Practice/Limitations
Goessl et al, (2017)	The effects of heart rate variability (HRV) biofeedback on the reduction of symptoms of anxiety in adults No theory framework identified	Random Effects Meta-Analysis Level of Evidence I	Setting- Inpatient and Outpatient Sample- 24 RCTS N=484 Searches for literature in PubMed, Psycinfo and Cochrane 232 studies with 188 exclusions with a further 8 exclusions for insufficient data Adults 18 or older Both male and female One treatment had to be HRV biofeedback, self-reported stress and or anxiety tools were used to measure Exclusion criteria: Anyone under the age of 18 was excluded Use of additional biofeedback methods other then HRV were also used or if the study had a mix of HRV and another treatment method	Becks Anxiety Inventory (BAI), Hospital Anxiety and Depression Scale (HADS), State-Trait Anxiety Inventory (STAI-T), PTSD Checklist (PCL-S), Symptom Checklist 90 Revised, Perceived Stress Scale (PSS), Detailed Assessment Of PTSD (DAPS), Derogatis Stress Profile (DSP), Depression Anxiety Risk Scale	HRV can be an effective treatment in anxiety Effect size of Hedges g= 0.81 so risk of bias is low in the studies Outcomes did not seem to be based on year, number of sessions or gender, possibly supporting broad range of use of HRV among those with symptoms of anxiety	HRV or Biofeedback may be an effective integrative treatment to help with symptoms of anxiety in the adult population Limitations Studies did not report on specific anxiety disorders and self-report findings

Table B.1 Continued

Author	Purpose/Theory	Design	Setting/Sample	Survey/Instruments	Findings	Implications for DNP Practice/Limitations
Gibbert et al., 2017	Investigating if passion flower extract can relieve stress and nervousness No theory framework identified	Multicenter, prospective non-interventional study Level of Evidence III	Setting- Mixed Sample- N=154	German Health Interview and Examination Survey For Adults (DEGS1), Resilience 3 Questionnaire, Euroqual Group Patient Questionnaire, Visual Analog Scale Average dose of 2.4 tablest of passion flower extract daily with most frequent dose 1 tablet 3 times a day	Reduction of anxiety and increase in resilience for patients with nervousness or stress P=<0.001 for all symptoms	Passion flower may be a helpful treatment for adults with anxiety Limitations This larger study would have benefited from a control group

Table B.1 Continued

Author	Purpose/Theory	Design	Setting/Sample	Survey/Instruments	Findings	Implications for DNP Practice/Limitations
Hidese et al., 2019	Explore the efficacy of L Theanine on adults for anxiety and cognitive ability No theory framework identified	Randomized placebo control trial Level of Evidence II	Setting- Recruiting from websites, magazines, and local community announcements Sample-N=30 Men and women Adults aged 18 and over Mean age was 48 Screened by a psychiatrist Exclusion Criteria: Previous treatment of any psychiatric disorder, severe illness, or pregnancy	Japanese Version of Self-Rating Depression Scale (SDS), State-Trait Anxiety Scale (STAI), Pittsburgh Sleep Quality Index (PSQI) Were Used For Anxiety, Depression, And Sleep Rating Trail Making Test, Stroop Test and Japanese Version of Brief Assessment Of Cognition In Schizophrenia (BACS) was used to rate cognition Fasting venous blood samples collected at noon and 1300 day of eval, week 4, week 6 and week 10 of the trials Samples included: Glucose, Hemoglobin A1C, CBC, Cortisol levels and IGG-A levels measured	L theanine had statistically significant improvement in anxiety No statistical significance in cognitive function SDS, STATI, PSQI ($p<0.019$, 0.006, 0.013) Scores decreased after 4 weeks showing short term benefit from L Theanine for stress and anxiety No significant changes in blood samples No adverse reactions reported	L Theanine may be a short term, safe and effective treatment in adults with anxiety Limitations include a smaller study, possible bias regarding consumption of green tea outside the study.

Table B.1 Continued

Author	Purpose/Theory	Design	Setting/Sample	Survey/Instruments	Findings	Implications for DNP Practice/Limitations
Hieu et al., 2019	To determine the efficacy of chamomile in the treatment of GAD, anxiety symptoms, sleep, and insomnia No theory framework identified	Systematic Review and Meta-Analysis Level of Evidence I	Setting- inpatient and outpatient Sample- 12 RCTs N=965 Adults over the age of 18 Male and female, but more females in the study then males Males N=200 Female N=765 Chamomile in the studies could be an oral supplement, inhaled, a gel or a massage oil Searches in PubMed, Science Direct, Cochrane Central, Scopus, Google Scholar, WHO Global Health Library, ISI Web of Science, Control Trials, EMBASE and clinical trials.gov RCTs and quasi experimental studies included No age restriction (however all were over the age of 18), language or date of publication or place	Beck Anxiety Inventory Scale (BAI), Beck Depression Inventory (BDI), Clinical Global Impression Severity (CGI-S), Edinburgh Postnatal Depression Scale (EPDS), Fatigue Severity Scale (FSS), Hamilton Anxiety Rating Scale (HAM-A), Insomnia Severity Index (ISI), No Report (NR), Postpartum Fatigue Scale (PFS), Psychological Well-Being Score (PGWB), State Anxiety Inventory Scale (SAI), State Trait Anxiety Inventory (STAI), The Pittsburgh Quality Index Scale (PSQI), Postpartum Sleep Quality Scale (PSQS)	Chamomile can be an effective treatment for anxiety and sleep Improvement of GAD symptoms in the studies was evaluated using GAD 7, HAM A, BAI, PGWB and CGI-S HAM-A showed improvement in GAD SDM -1.43, p=0.007 Risk of bias ranged in the studies from low to high	Chamomile could be a safe and affordable integrative treatment for GAD for short term intervention for adults with anxiety Limitations In the studies efficacy for GAD at 2-4 weeks, longer term, higher quality studies should be done More evidence needed for anxiety symptom management and insomnia Some of the studies did have a high level of bias, and more studies may be needed to further support the claims of efficacy in GAD

Table B.1 Continued

Author	Purpose/Theory	Design	Setting/Sample	Survey/Instruments	Findings	Implications for DNP Practice/Limitations
Kim & Kim, 2018	Relaxation therapy and the effect that it can have on symptoms of anxiety No theory framework identified	Systematic Review and Meta-Analysis Level of Evidence I	Setting- inpatient and outpatient Sample-16 RCTs N=856 Adults aged 18 and older Male and female Korean or English language Studies were published between 1988-2014 Relaxation techniques were Autogenic Training (AR) and Mindfulness-Based Stress Reduction (MSBR) Exclusion Criteria: Not an original work, relaxation therapy combined with another technique, compared relaxation to a pharmacology treatment, used relaxation therapy as a comparator.	Beck Anxiety Inventory Scale (BAI), Beck Depression Inventory (BDI), Hamilton Anxiety Rating Scale (HAM-A), Penn State Worry Questionnaire (PSWQ), Panic/Anxiety Composite Score (PACS), Leibowitz Social Anxiety Scale (LSAS), Mini Mood and Anxiety Symptoms Questionnaire (MASQ-AA), Clinician Severity Rating (CSR), Social Interaction Scale (SIS), Social Phobia Scale (SPS), Symptom Check List 90 (SCL-90-R), Fear Questionnaire (FQ), State-Trait Anxiety Inventory Scale (STAI)	Relaxation therapy can be an effective and easy treatment for anxiety symptoms Hedges' g= 0.62 95% CI: 0.42-0.81 Effect size on anxiety was robust	Relaxation therapy could be an easy and effective tool to help those with anxiety Limitations Needing studies that help to combine effects of medications with addition of relaxation therapy in helping symptoms of anxiety

Table B.1 Continued

Author	Purpose/Theory	Design	Setting/Sample	Survey/Instruments	Findings	Implications for DNP Practice/Limitations
Kligler et al., 2016	Review of complementary and alternative methods to treat common conditions seen in primary care No theory framework identified	Systematic Review Level of Evidence I	Setting- mixed Sample- 37 meta-analysis and RCTs N=42,264 Searches PubMed, Cochrane database, NCCIH database, Natural Medicines database, DynaMed	Self-report questionnaires	Effect size of 0.34, 0.48 and 0.29 in the RCTS reviewed Found limited evidence that anxiety is effective for reducing anxiety	A study that shows some benefits to exercise, even if they are somewhat limited. Exercise has multiple benefits for health and is a way to manage anxiety and maintain other health benefits l Higher quality studies with better controls and instruments should be used

Table B.1 Continued

Author	Purpose/Theory	Design	Setting/Sample	Survey/Instruments	Findings	Implications for DNP Practice/Limitations
Lopresti et al., 2019	To look at the efficacy of Ashwagandha in reducing symptoms of stress, anxiety, and hormones No theory framework identified	Randomized, double blind, placebo-controlled study Level of Evidence II	Setting- outpatient Sample- N=60 (N=37 males, N=23 females) General volunteers who had visited either of the healthcare facilities in the area 60-day study Ages 18-65 HAM-A of 6-17 Exclusion criteria: pregnancy or not on a contraceptive, lactating women, allergy to ashwagandha, acute narrow angle glaucoma, prostrate hypertrophy, heart, endocrine or renal disease, any chronic disease that effects stress/anxiety, restrictions of ADLs, suffered from mental illness past 6 months, on any other herb/supplement or psychiatric medication, ETOH or substance abuse	Hamilton Anxiety Rating Scale (HAM-A), Depression, Anxiety, Stress Scale-21 (DASS-21) Serum cortisol DHEA-S Testosterone CBC-lipid profile for screening 240mg capsule ashwagandha vs placebo capsule	41% reduction in HAM-A scores in the treatment group compared to control group ($p<0.001$) compared to a 24% reduction in the control group ($p<0.001$) 30% reduction in DASS-21 in the treatment group compared to 10% in the control group	RCT demonstrating efficacy of ashwagandha in the treatment of adults with anxiety Some limitations are the study addressed healthy adults and needing studies on clients with anxiety diagnosis Possibly a longer study in the future rather than a 60-day study

Table B.1 Continued

Author	Purpose/Theory	Design	Setting/Sample	Survey/Instruments	Findings	Implications for DNP Practice/Limitations
Noah et al., 2021	Looking at the combination of magnesium and B6 supplements to lower stress and anxiety in adults vs magnesium alone No theory framework identified	Post-Hoc analysis of an RCT Level of Evidence II	Setting- outpatient Sample- N=264 Adults aged 18-50 SD age 31.4 years Male and female 74% were female DASS-42>18 indicating severe stress Had to have magnesium levels considered to be suboptimal (0.66-0.84) 2 groups magnesium (300mg and 30mg) and B6 or magnesium only (300mg)	Depression Anxiety and Stress Scale (DASS-42) Short Form Health Survey (SF-36) Magnesium levels	DASS 42 over both groups improved over the 8-week study period No significant difference between groups ($P<0.05$) However, improvement in both groups in anxiety and depression SF-36 showed improvements in all categories between both groups Most changes observed first 4 weeks	Magnesium with or without B6 can be an effective tool to reduce symptoms of anxiety Limitations include There was no control group in the study Participants may have taken other medications which may or may not have had effects on magnesium levels
Rycroft-Malone & Tsai, 2018	Looking at evidence for herbal and botanical treatments and making practice recommendations based on that Focusing specifically on chamomile for this review No theory framework identified	Practice recommendations from the Journal of Family Practice Level of Evidence I	**Setting**- mixed **Sample**- 2 RCTS and Meta-analysis regarding anxiety and chamomile were reviewed	Data reviewed from a controlled clinical trial and a randomized double placebo-controlled trial of adults	Modest anxiolytic properties found in both studies	Chamomile is a well-known herbal remedy for sleep. Chamomile also has some anti-anxiety effects in adults Limitations Overview of practice recommendations for primary care, may benefit from specific psychiatry focused studies

Table B.1 Continued

Author	Purpose/Theory	Design	Setting/Sample	Survey/Instruments	Findings	Implications for DNP Practice/Limitations
Saeed et al., 2019	Benefits of nonmedicinal therapies such as yoga and meditation on anxiety No theory framework identified	Review of Systematic-Reviews and Meta-Analysis Level of Evidence I	Setting -Mixed Sample –33 RCTS specific to anxiety were reviewed 209 studies specific to mindfulness meditation were reviewed	On overview of meta-analysis and systematic reviews shows that yoga, exercise, and meditation may be helpful in reducing symptoms of anxiety and depression No trials showed harm in using exercise to help in reduction of anxiety symptoms	Meditation has been found to have a positive effect on anxiety symptoms with varying results from multiple studies No harm in doing meditation Not all studies showed immediate benefit from meditation	Meditation is a nonharmful self-guided at home therapy that may help with anxiety symptoms Limitations: some studies did not find immediate benefit which may discourage those looking for immediate relief of anxiety
Schneider et al., 2003	Research article regarding development of the Integrative Medicine Attitude Questionnaire (IMAQ No theory framework identified	Research Article Level of Evidence I	Setting -Integrative medicine program Sample -faculty, residents, fellows and medical students N=111	Development of the IMAQ Factor Analysis Cronbach's alpha	IMAQ is reliable and valid in measuring attitudes toward alternative/complementary therapies among providers and students	Use of IMAQ to measure attitudes of providers toward CAM before and after an online educational seminar

Table B.1 Continued

Author	Purpose/Theory	Design	Setting/Sample	Survey/Instruments	Findings	Implications for DNP Practice/Limitations
Shinjyo et al., 202	Determining usefulness of Valerian root in treating sleep and anxiety	Systematic Review and Meta-Analysis Level of Evidence I	Setting -Mixed Sample – 60 RCTs N=6,894 8 studies specific to reduce anxiety were reviewed N=535 Searches done in: PubMed, Science Direct, Cochrane Library	Pittsburgh Sleep Quality Inventory (PSQI), Epworth Sleepiness Scale (ESS), Hamilton Anxiety Rating Scale (HAM-A), State Trait Anxiety Inventory (STAI)	Several studies found that Valerian root can be effective in reducing anxiety with longer term use 4 weeks, or for short term use or PRN for anxiety Dose range Standard Extract 600mg a day 81.3mg of Valepotriates Valerian root/rhizome 530mg daily Valerian extract 1,260 for 3 days for PMS anxiety	Valerian seems to have several anxiolytic qualities for multiple anxiety treatments Limitations Long term, single dose placebo-controlled studies would be helpful to determine dosing ranges and larger scale studies should be done

Table B.1 Continued

Author	Purpose/Theory	Design	Setting/Sample	Survey/Instruments	Findings	Implications for DNP Practice/Limitations
Su et al., 2019	Looking at Omega-3s regarding efficacy with depression and anxiety No theory framework identified	Systematic-Review and Meta-Analysis Level of Evidence I	Setting -Outpatient Sample N=1203 19 clinical trials Mean age 43.7 years Searches done in: PubMed, Embase, ProQuest, Science Direct, Cochrane Library, Clinical Key, Web of Science and Clincialtrials.gov	Yale Brown Obsessive Compulsive Scale (YBOC), Profile of Mood States, State Trait Anxiety Inventory, Hamilton Anxiety Rating Scale, Gad-7, Depression, Anxiety and Stress Scales, Clinical Administered PTSD Scale, Beck Depression Inventory, Impact of Event Scale Revised, Connors Score Anxiety Scale, Neuropsychiatric Inventory, Test Anxiety Severity, Hospital Depression and Anxiety Scale and Sub Scale, Child Behavioral Checklist Anxiety Scale Mean dosage of Omega 3=1605.7mg	Treatment with omega-3 PFU may be associated with a reduction in anxiety in adults with anxiety compared to placebo (p=.01) Random Effects Model	Omega-3 offers many health benefits and may help in reduction of anxiety Limitations are design study, need for standardization and higher quality studies, heterogeneity of this study

Table B.1 Continued

Author	Purpose/Theory	Design	Setting/Sample	Survey/Instruments	Findings	Implications for DNP Practice/Limitations
van Dis et al., 2021	Looking at CBT as treatment for anxiety Focusing on long term efficacy of CBT No theory framework identified	Systematic-Review and Meta-Analysis Level of Evidence I	Setting -Outpatient Sample -69 RCTs N=4118 Adults Searches in: PubMed, PsycInfo, Embase, Cochrane, and OpenGrey	Had to use CBT as a therapy Independent screening of records by researchers, data pooled using random effects model Hedges g was used to calculate anxiety symptoms after treatment	CBT has long been the standard for anxiety treatment with adjunctive medications CBT helpful up to 12 months after cessation of therapy Relapse studies need to be further done to continue to look at efficacy of CBT long term	Gold standard evidence-based treatments are needed to be included in the integrative protocol for the practice This study was one of the few looking at long term effects of CBT Limitations include that most of the studies were not of high quality

APPENDIX C

INTEGRATIVE MEDICINE ATTITUDE QUESTIONNAIRE

Your advanced practice role credentials_____

Total years in practice in current role: _____

Clinical specialty:_____

Absolutely disagree 1 2 3 4 5 6 7 Absolutely agree

1) A patient is healed when the underlying pathological processes are corrected or controlled

2) The providers role is primarily to promote the health and healing of the physical body.
3) Patients whose providers are knowledgeable of multiple medical systems and complementary and alternative practices (i.e., Chinese, Ayurvedic, Osteopathic, Homeopathic, etc.), in addition to conventional medicine, do better than those whose physicians are only familiar with conventional medicine.
4) Providers should warn patients to avoid using botanical medicines (herbs) and dietary supplements until they have undergone rigorous testing such as is required for any pharmaceutical drug.
5) It is appropriate for providers to use intuition ("gut feelings") as a major factor in determining appropriate therapies for patients.
6) The spiritual beliefs and practices of providers play no important role in healing.
7) The spiritual beliefs and practices of patients play no important role in healing.
8) It is irresponsible for providers to recommend acupuncture to patients with conditions like chemotherapy-related nausea and vomiting or headache.
9) End of life care should be valued as an opportunity for providers to help patients heal profoundly.
10) It is not desirable for a provider to take therapeutic advantage of the placebo effect.

11) Healing is not possible when a disease is incurable.
12) Providers knowledgeable of multiple medical systems and complementary and alternative practices (i.e., Chinese, Ayurvedic, Osteopathic, Homeopathic, etc.), in addition to conventional medicine, generate improved patient satisfaction.
13) Therapeutic touch has been completely discredited as a healing modality.
14) Providers who model a balanced lifestyle (i.e. Attending to their own health, social, family and spiritual needs, as well as interests beyond medicine) generate improved patient satisfaction.
15) Quality of life measures are of equal importance as disease specific outcomes in research.
16) Chiropractic is a valuable method for resolving a wide variety of musculoskeletal problems (beyond back pain)
17) The providers role is primarily to treat disease, not to address personal change and growth of patients
18) Massage therapy often makes patients "feel" better temporarily but does not lead to objective improvement in long-term outcomes for patients.
19) The innate healing capacity of patients often determines the outcome of the case regardless of treatment interventions.
20) A strong relationship between patient and provider is an extremely valuable therapeutic intervention that leads to improved outcomes.
21) Providers who strive to understand themselves generate improved patient satisfaction.

22) Instilling hope in patients is a provider's duty.
23) Providers should be prepared to answer patient's questions regarding the safety, efficacy, and proper usage of commonly used botanical medicines such as Saw Palmetto, St. John's Wort, Valerian, etc

24) Counseling on nutrition should be a major role of the providers towards the prevention of chronic disease.

25) Providers should avoid recommending botanical medicines based on observations of long-term use in other cultures and systems of healing, because such evidence is not based on large randomized controlled trials.
26) Osteopathic manipulative therapy is a valuable method for resolving a wide variety of musculoskeletal problems (beyond back pain).
27) Information obtained by research methods other than randomized controlled trials has little value to providers.
28) It is ethical for providers to recommend therapies to patients that involve the use of subtle energy fields in and around the body for medical purposes (i.e. Reiki, Healing touch, Therapeutic touch, etc.
29) Providers who strive to understand themselves provide better care than those who do not.

APPENDIX D

PRE AND POST EVALUATIONS

An Introduction to Complementary and Alternative Practices for Adults with Anxiety
Pre Seminar and Post Seminar Survey

Survey Identification
To ensure confidentiality, we are asking you to create a non-descript identifier so we can compare your responses.

1. Please provide your month and day of birth followed by years in practice (*MMDDYY;* example 112007)

_____

Demographics
The responses to the demographic questions will only be used to describe the participants of the survey in aggregate. No identifying information will be linked to any responses for reporting purposes.

2. Which category includes your current age?
   a. 18-30 years
   b. 30-50 years
   c. 50+ years

3. What is your gender identity?
   a. Male
   b. Female
   c. Nonbinary
   d. Transgender male
   e. Transgender female
   f. Not listed
   g. Do not wish to disclose

4. What Advanced Practice RN Certifications do you currently hold? (mark all that apply)
   a. FNP
   b. PMHNP
   c. CNS
   d. AGNP
   e. PNP
   f. WHNP
   g. Other_____

5. How many years have you practiced as an advanced practice RN?
   a. 1-5
   b. 5-10
   c. 10+

6. Have you had any formal training regarding alternative/integrative practices for mental health?
    a. Yes
    b. No
    c. Unknown
    d. Please describe:

***Please Note Demographics Will Only Be Included in Pre Evaluation**
Pre-Seminar and Post-seminar Survey Items

Please use the following scale to answer the questions below unless otherwise indicated

Likert Scale 1-7 (1- strongly disagree) (2-agree) (3-somewhat disagree) (4-neither agree or disagree) (5-somewhat agree) (6-agree) (7-strongly agree)

Conventional treatment methods

1. I am satisfied with conventional treatments in my practice for adults with anxiety

2. Conventional treatments are superior to alternative/complementary treatments for adults with anxiety

3. Conventional treatments are safer than alternative/complementary treatments for adults with anxiety

Awareness and understanding of integrative care

4. I understand what is meant by integrative care

5. I know how to apply integrative care in my practice when treating adult clients with anxiety

6. I do a good job of identifying adult clients with anxiety that may benefit from integrative care

7. I use integrative practices in my personal life

8. Common alternative/complementary treatment options for adults with anxiety include (Check all that apply)
    a. Magnesium
    b. ECT
    c. Meditation
    d. SSRIs

Knowledge of contraindications and proper use of integrative techniques for adults with anxiety

9. I am comfortable with education for adult clients regarding contraindications of integrative care techniques to treat anxiety

10. Ashwagandha can be used safely in the following cases: Check all that apply
    a. Someone with anxiety that has no medical concerns
    b. Someone that is on an SSRI or SNRI
    c. Someone that is on immunosuppressants
    d. Someone that has a food allergy to nuts

11. I am comfortable with instructing clients on mindfulness meditation practices

12. I am comfortable with instructing clients on Ashwagandha use

13. I am comfortable with directing clients to locate and purchase best quality supplements available

Understanding of literature regarding integrative care to treat adults with anxiety

14. I understand where to find best evidence-based literature regarding integrative techniques

***Please Note the Short Answer Questions Will Only Be On The Post Evaluation**

Short Answer Questions

What was the biggest take home point?

What improvement could be added for this and future presentations?

APPENDIX F

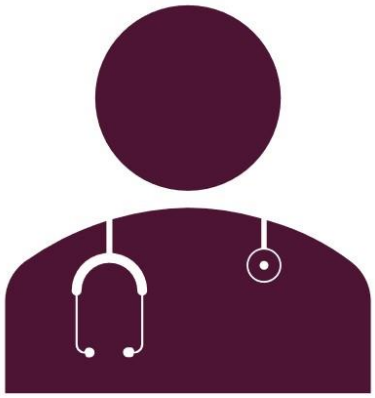
SEMINAR

AN INTRODUCTION TO COMPLEMENTARY/ALTERNATIVE PRACTICES FOR ADULTS WITH ANXIETY

Alder Grove Health Services Educational Seminar

DISCLOSURES

- This is an educational seminar to fulfil requirements for the Doctor of Nursing Practice degree
- This presenter has no financial incentives or conflicts of interest that relate to this educational seminar



BEFORE WE START

- How familiar are you with integrative health?
- What questions do you have regarding integrative health?
- What are concerns or fears regarding integrative health?
- What have you heard or what integrative methods have you used yourself?
- How satisfied are you with patient outcomes and efficacy of conventional treatments for adults with anxiety?

LEARNING OBJECTIVES

- Identify 2-3 common integrative options for adults with anxiety
  - Positive increase in post evaluation questionnaire scores item #8
- Identify ashwagandha and mindfulness meditation as integrative therapeutic options when caring for clients with anxiety
  - Positive increase in post evaluation questionnaire scores items #9,10,11,12
- Increase in understating and awareness of integrative care
  - Positive increase in post evaluation scores items #4,5,6

LEARNING OBJECTIVES

- Identify 5 contraindications and potential side effects of ashwagandha
  - Positive increase on post questionnaire item #10
- Report increased positive increase of attitude toward use of alternative/complementary treatments
  - Increase in post IMAQ questionnaire scores by a 30% increase in IMAQ post scores

FLORENCE NIGHTINGALE

- Florence Nightingale

"It is often thought that medicine is the curative process. It is no such thing; medicine is the surgery of functions, as surgery proper is that of limbs and organs. Neither can do anything but remove obstructions; neither can cure; nature alone cures. Surgery removes the bullet out of the limb, which is an obstruction to cure, but nature heals the wound. So it is with medicine; the function of an organ becomes obstructed; medicine, so far as we know, assists nature to remove the obstruction, but does nothing more" (Nightingale, 1860).

WHAT DOES INTEGRATIVE TREATMENT MEAN?

Integrative treatment blends standard treatment methods and alternative and complementary treatments

Integrative care includes collaboration with other professions to achieve best results for clients

COMMON INTEGRATIVE TREATMENT METHODS FOR ANXIETY

- CBT and Therapy
- SSRI's and conventional methods
- Meditation techniques
  - Yoga, progressive relaxation, bio feedback
- Supplementation
  - Ashwagandha
  - Chamomile
  - Valerian Root
  - PassionFlower
  - L-Theanine
  - Omega 3's

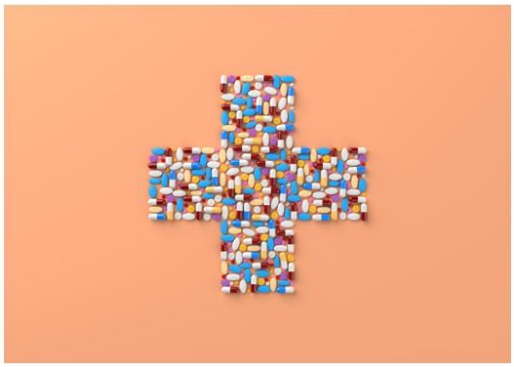
ANXIETY

- Mental Health is one of the leading causes of illness worldwide
- Anxiety is a growing global health concern and continues to increase
- 40 million Americans (18%) of the population suffer from clinical symptoms of anxiety
- Anxiety continues to increase across the globe

(ADAA, 2021)

TREATMENTS FOR ANXIETY

- Current treatments for anxiety remain woefully inadequate
  - SSRI's afford relief in about 60-80% if patients
    - Only about half of those achieve remission

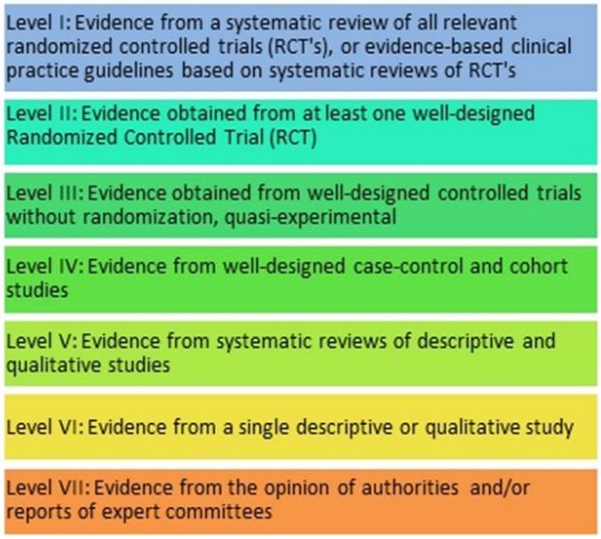


KNOWLEDGE REGARDING SUPPLEMENTS

- Why is there discomfort with integrative treatments?
  - Evidence may be viewed as of poorer quality compared to traditional treatments
  - Sense of safety with conventional treatments
  - Lack of knowledge from current academic curriculum

LITERATURE REVIEW

- So, what does the literature say?
  - For the purpose of creating this seminar, highest quality studies were used
  - Meta-analysis and systematic reviews made up the bulk of the literature review for this seminar



East Carolina Libraries, 2022

ASHWAGANDHA OR WITHANIA SOMNIFERA

- An herb originating from India
- Used for calming properties for centuries
- Dosing 300-600mg considered safe
- Common side effects
  - Gastrointestinal upset
  - Rare reports of Liver damage
  - Considered safe in doses of increments of 12 weeks

ASHWAGANDHA OR WITHANIA SOMNIFERA

- No known food interactions
- Drug to drug interactions/use with caution
  - Antidiabetics –consider collaboration with primary care as ashwagandha can lower blood sugar levels
  - Antihypertensives – consider collaboration with primary care as ashwagandha can lower blood pressure
  - Benzodiazepines- be aware of sedating qualities of ashwagandha in combination with benzodiazepines
  - Thyroid medications - consider collaboration with primary care as ashwagandha can increase thyroid levels
  - May need to be held prior to surgical procedures

ASHWAGANDHA OR WITHANIA SOMNIFERA

- Absolute contraindications
  - Immunosuppressants
  - Pregnancy or breast feeding

USE OF ASHWAGANDHA

- Ashwagandha has been shown to be safe and effective for use in moderate to severe anxiety
- Can be used as mono therapy or adjunctive therapy for anxiety
- Can be used with panic symptoms

LITERATURE REVIEW ASHWAGANDHA

- Borras et al., 2021
- Systematic Review Results
  - Reduction in HAM-A
  - Reduction in in DASS-21
- Study concluded that ashwagandha can be an effective treatment in anxiety and sleep

LITERATURE REVIEW ASHWAGANDHA

- Lopresti et al., 2019
- Randomized Double-Blind Placebo Controlled Study
- 60-day study with 60 participants
- Adults ages 18-65
- HAMA 6-17 to be included
  - 41% reduction in scores compared to 21% in control group
- DASS 21
  - 30% reduction in scores compared to 10% in control group

CASE PRESENTATION USE OF ASHWAGANDHA FOR ADULT ANXIETY

8 week prospective, randomized, double blind, placebo-controlled study	58 participants	Effects of ashwagandha on stress and anxiety	Baseline perceived stress scale (PSS) >20
PSS baseline, 4 weeks, 8 weeks for stress monitoring	HAM A for anxiety monitoring	Ages 18-55	3 study arms, 125mg ashwagandha, 300mg ashwagandha, placebo • (Salve et al., 2019)

Meditation has been used for centuries

There is no agreed upon definition of meditation

All have common themes

Quiet place free of distraction

Focus attention on body-based functions

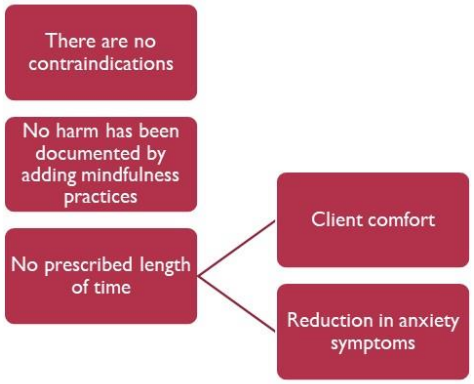
Reduce stress and anxiety by being rooted in the moment

MINDFULNESS MEDITATION

USE OF MINDFULNESS MEDITATION

- Mindfulness meditation iss useful will all types of anxiety symptoms
  - Panic
  - Phobias
  - Work stress or anxiety
  - Personal stress or anxiety

MINDFULNESS MEDITATION



https://www.youtube.com/watch?v=yWuPJFAx3rA

MINDFULNESS MEDITATION

LITERATURE REVIEW MINDFULNESS MEDITATION

- Bandelow et al., 2015
- Meta Analysis
- 234 RCTS reviewed with over 37K participants
- HAM-A ,GAD, PDA
- LSAS, SAD
  - Mindfulness meditation had the highest effect size compared to other psychotherapies using confidence intervals

LITERATURE REVIEW MINDFULNESS MEDITATION

- Saaed et al., 2019
- Review of systematic reviews and meta-analysis
- 209 studies specific to meditation were reviewed
- Yoga, exercise and mindful meditation may be helpful in reducing anxiety symptoms
- Meditation is a nonharmful self-guided at home therapy that may help with anxiety symptoms

MINDFULNESS MEDITATION CASE PRESENTATION

- Essen-Mitte oncology clinic
  - Harvard Mind/Body Medical Institute
- Oncology Clinic that has a Mindfulness-Based Stress Reduction (MBSR) program for cancer patients
  - Program includes mindfulness training, yoga, mindful exercise, nutrition, naturopathic self-help and cognitive restructuring
- 11-week program
  - Two clients with cancer
  - One with breast cancer and one with a malignant melanoma

(Cramer et al., 2013)

MINDFULNESS MEDITATION CASE PRESENTATION

Case one

47-year-old cis gender female

- Breast cancer with mastectomy
- Hospital Anxiety and Depression Scale
  - Start of treatment HADS anxiety of 8 HADS depression 11
  - After 11 weeks HADS anxiety score of 2 HADS depression score of 5
  - Her physical complaints decreased
  - Reported better quality of life
- (Cramer et al., 2013)

MINDFULNESS MEDITATION CASE PRESENTATION

Case two

40-year-old cis gender female

- Malignant melanoma
- Had 50 excisions over a 5-year period
- HADS anxiety of 12
- Program reduced HADS to an 8
- Pain decreased
- Continued home practice reduced HADS to 6
- (Cramer et al., 2013)

INFORMAL MEDITATION PRACTICE INTRODUCTION

- Kathryn "Ann" Terrill is a Mindfulness Based Stress Reduction (MBSR) certified practitioner
  - Ann Terrill has been a psychiatric mental health nurse practitioner with over 30 years of nursing experience
  - Ann received her Masters in Nursing (MSN) from the University of Colorado, College of Nursing
  - Ann is a current practicing provider at Alder Grove Health Services

QUESTIONS

- The provided handout is a summary todays' seminar
- Resources for Ashwagandha and Mindfulness Meditation
- Any Questions??

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Note. This PowerPoint presentation was created by the author.

APPENDIX F

HANDOUT FOR SEMINAR

Ashwagandha & Mindfulness Meditation Resources

Summary of Educational Seminar Presented at Alder Grove Health Services

Jessica Lynn Fynboh, MSN, PMHNP-BC
Doctoral Candidate

ASHWAGANDHA

- Herbal supplement
- An Ayurvedic medicine from India
- Doses of 480mg a day or 1000mg a day in split doses are typical treatments
- Can be used alone or in conjunction with conventional treatment
- Reduction in anxiety symptoms have been noted in the literature

Contraindications

- Drug to drug interactions/use with caution
- Anti-diabetics can lower blood sugar levels
- Antihypertensives can lower blood pressure
- Combining with benzodiazepines can cause sedation
- Thyroid medications can increase thyroid levels
- Don't take prior to surgical procedures

Absolute Contraindications

- Immunosuppressants
- Pregnancy or breast feeding

MINDFULNESS MEDIATION

- Safe and effective simple way of reliving stress and anxiety
- Client can do anywhere from at home, work, driving, etc.
- Providers can help train in informal practices during a follow up or intake session

Ann Terrill, MSN, PMHCNS-BC

- Ann is certified in MBSC and will be leading trainings for the staff at Alder Grove
- Ann is a resource inside Alder Grove that can help with training providers in Alder Grove to use mindfulness for yourself
- Learning to do mindfulness yourself can help you with your daily stress and anxiety which makes you more available for your patients and family

> *The little things? The little moments? They aren't little.*
> Jon Kabat-Zinn

Helpful Resources for Mindfulness

- YouTube has many mindfulness practices clients can do at home: YouTube Mindfulness Meditation
- Free resources from The Free Mindfulness Project: The Free Mindfulness Project
- Headspace is a good app, but does require a fee: Headspace

Note. The handouts for the seminar were created by the author.

APPENDIX G

SITE APPROVAL LETTER

ALDER GROVE HEALTH SERVICES
www.aldergrovegroup.com

June 14, 2022

To Whom It May Concern,

I am very pleased that Jessica Fynboh, PMHNP, BC will be completing her DNP project at Alder Grove Health Services, Inc. I am aware of this project as well as aware of the time commitment needed for its implementation and assessment (including seminar hours). Jessica has my full support in this project.

Thank you,

Holly Vause, DNP, PMHNP, BC
Owner
Alder Grove Health Services, Inc.
720-331-6899 x3

APPENDIX H

INSTITUTIONAL REVIEW BOARD APPROVAL

UNIVERSITY OF
NORTHERN COLORADO

Institutional Review Board

Date:	08/11/2022
Principal Investigator:	Jessica Fynboh
Committee Action:	**IRB EXEMPT DETERMINATION – New Protocol**
Action Date:	08/11/2022
Protocol Number:	2208041611
Protocol Title:	Development of an educational seminar for the integrative medical management of adults with anxiety
Expiration Date:	

The University of Northern Colorado Institutional Review Board has reviewed your protocol and determined your project to be exempt under 45 CFR 46.104(d)(701) (702) for research involving

Category 1 (2018): RESEARCH CONDUCTED IN EDUCATIONAL SETTINGS. Research, conducted in established or commonly accepted educational settings, that specifically involves normal educational practices that are not likely to adversely impact students' opportunity to learn required educational content or the assessment of educators who provide instruction. This includes most research on regular and special education instructional strategies, and research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

Category 2 (2018): EDUCATIONAL TESTS, SURVEYS, INTERVIEWS, OR OBSERVATIONS OF PUBLIC BEHAVIOR. Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met: (i) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects; (ii) Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation; or (iii) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by 45 CFR 46.111(a)(7).

APPENDIX I

RECRUITMENT EMAIL LETTER

Recruitment Letter

Dear Provider

My name is Jessica Fynboh, and I am a candidate for the Doctor of Nursing Practice (DNP) degree at the University of Northern Colorado School of Nursing. As a psychiatric nurse practitioner, I would like to invite you to participate in a seminar for integrative care for adults with anxiety in our clinical setting.

The purpose of this project is to determine if an educational seminar regarding the integrative care of adults with anxiety in the outpatient setting will enhance understanding, knowledge, and attitudes toward the use of alternative/complementary treatments. The goal of the seminar is to give you tools to enhance your treatment options for adults with anxiety using alternative/complementary treatment methods, combined with conventional treatment methods, creating an integrative approach to care.

Should you agree to participate, you will be asked to participate in an educational seminar that will take approximately 1-2 hours of your time. A pre and post evaluation survey will be sent which contains 14 questions scored using a Likert Scale, with 2 short answer questions. The Integrative Medicine Attitude Questionnaire (IMAQ) will also accompany the pre and post evaluations. This questionnaire determines your initial attitude toward integrative medicine and will determine if there is a change upon completion of the seminar. The total time commitment for participation in this project is estimated to be 4 hours over a 3–4-week span. This includes 1-2 hours for the seminar, and 20 minutes for each evaluation and IMAQ.

If you have any questions about this project, you may contact me at fynb2327@bears.unco.edu or by phone at 720-244-2793. Thank you very much for your time, consideration, and support of this scholarly project. This project has received approval from the University of Northern Colorado Institutional Board (IRB).

Sincerely,

Jessica Fynboh, DNP Candidate, BSN, MSN, PMHNP-BC