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Anxiety Treatments in Older Adults

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Anxiety treatments in older adults

A Thesis Presented to the Faculty of Daemen College

In Partial Fulfillment of the Requirements for the Degree Masters of Science in Nursing

By

Brittany Bakal Holman, RN, BS

April 10, 2019

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Thesis Approval

This is to certify that Brittany Bakal Holman, in the Master's Program at Daemen College Department of Nursing has successfully completed her thesis entitled: "A knowledge assessment of anxiety treatments in older adults", in partial fulfillment for the degree of Masters in Science in the Adult Gerontologic Nurse Practitioner program.

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Purpose and Significance: This research study focused on the topic of anxiety management in older adults. Previous research has noted the prevalence of anxiety in the older adult population. It has also established previous success with nonpharmacological treatment in decreasing anxiety levels. The purpose of the study was to determine the amount of knowledge possessed by older adults about different anxiety treatment methods. The significance of the study was to determine whether older adults are being educated properly on how to effectively employ nonpharmacological techniques to manage anxiety.

Theoretical Framework: Imogene King’s conceptual system, including the personal, interpersonal, and social systems, provided the foundation for this research study (Husband,

1988). In assessing the knowledge and effectiveness of specific anxiety treatments, health care providers can ensure that anxiety is managed adequately and safely encompassing all three systems emphasized by King.

Method: This study was a quantitative research study that incorporated a simple descriptive research design. Data was collected using a 28-question tool accessed through the Survey Monkey website. The survey was prefaced with a cover letter explaining inclusion criteria that included: informed consent, an age of 55 years or older with recognizable feelings of anxiety at least once a month for the last year. Data collection was voluntary and anonymous. Data was analyzed using SAS Version 9.4 software. Measures of central tendencies, relative frequencies and the chi-square test were utilized in analysis.

Findings: Fifty-nine surveys were completed and used for data analysis. The sample was composed of 59% females, 37% male, and 4% who preferred not to identify with a specific gender. The mean age range of participants was 60-64. Of the five treatments surveyed, 93.2% of participants report using distraction techniques to treat anxiety. However, therapy is used least often, with only 30.5% of participants who report using this treatment method. Although distraction was the most commonly used treatment, as needed anxiety medication was the treatment that was found to be the most effective, with 47.4% reporting effective anxiety reduction with this treatment. Exercise was found to be the next most effective anxiety treatment, with 41.5% reporting that it is moderately or very effective. Knowledge of therapy and as needed medication were reported the highest while less than half of the participants reported knowledge of exercise to treat anxiety. Using the chi-square test it was noted that despite anxiety level, as needed medications were reported the most effective treatment. However, those with minimal or

mild anxiety also reported a high effectiveness level with exercise (63%) and therapy (66.7%) as well.

Conclusion: The results of this study provide insight in the most effective ways to treat anxiety in the older adult population. Supported by prior research, results indicate exercise is the most effective nonpharmacological treatment. The results of this study can be translated to patient teaching through emphasis on exercise, discussion, and distraction as first line nonpharmacological treatments for minimal to mild anxiety levels.

Chapter 1: Introduction

Background

Clinically significant anxiety is one of the most common mental health issues in older adults. It has been estimated that up to 50% of community dwelling adults greater than 60 years old suffer from significant anxiety and that 15% have been diagnosed with an anxiety-related disorder (Koychev & Ebmeier, 2016). Furthermore, approximately fifty percent of those in this age group that have been only diagnosed with depression also suffer from frequent anxious feelings (Lenze et al., 2005). In fact, anxiety in older adults is twice as common as dementia, a common late life illness (Koychev & Ebmeier, 2016).

Anxiety has severe consequences in this age group contributing to a vastly decreased quality of life. Untreated anxiety in older adults has been proved to cause psychiatric and medical comorbidities, substance abuse, and suicide attempts. It has a negative effect on memory and emotional status. Research has shown that adults 60 years or older with high levels of anxiety

have a diminished recall for positive past events, information, or pictures (Herrera et al., 2017). In other words, they are unable to process positive information as efficiently, leading to diminished memory of this information. When recalling autobiographical memories, older adults with anxiety are more likely to focus on the negative events in their life and also exhibit much higher levels of distress and negative emotion when recalling their past (Herrera et al., 2017). Most importantly, anxiety in older adults leads to the onset of disability which causes a loss of independence (Lenze et al., 2005). Despite the already noted prevalence and negative effects of anxiety in the older adult population, anxiety continues to remain underdiagnosed and undertreated (Koychev & Ebmeier, 2016).

As noted above, anxiety in older adults is often misdiagnosed or treated improperly. It is common for somatic symptoms to accompany anxiety disorders throughout the entire age spectrum. However, when an older adult patient presents with a common somatic symptom, such as gastrointestinal distress, it is less likely to be deemed psychological in nature (Lenze et al., 2005). Practitioners are often quick to focus on the specific complaint without taking mental health issues into consideration. Aging is associated with increasing comorbidities. Therefore, symptoms of anxiety such as: shortness of breath, chest pain, gastrointestinal (GI) distress, and insomnia can mimic other symptoms of already present physiologic conditions. When the practitioner does suspect a mental health disorder, the older adult patient is less likely to accept a mental health referral, even after having a negative physical work up. This creates a vicious cycle of untreated anxiety, followed by an increase in somatic symptoms that further exacerbate anxiety when there is no physical root cause found for these symptoms (Lenze et al., 2005).

Research has proven that benzodiazepines are the most commonly prescribed anxiolytics for the older adult population (Kolar & Kolar, 2016). However, long term use of these medications have many dangerous side effects that are exacerbated in older adult patients as a

result of age- related pharmacokinetic changes. These side effects can include: daytime drowsiness, cognitive impairment, confusion, psychomotor impairment, depression, dependence, intoxication, and respiratory impairment (Sheikh et al., 2000). In addition, older adults take more daily medications than any other age group. Polypharmacy increases the risk of all drug interactions, as well as an alteration in the metabolism and clearance of medications, which can intensify the negative side effects associated with benzodiazepines (Sheikh et al., 2000).

Benzodiazepines have also been proven to cause 40% of deaths associated with drug poisoning in both older adult men and women (Carlsten, 2003). For the multitude of reasons discussed above, anti-anxiety medications have many risks, but are still used regularly.

Although clinical guidelines for anxiety treatment recommend a multifaceted approach that employs non-pharmacological and pharmacological treatment methods, nonpharmacological methods are often not adequately utilized (Muntingh et al., 2016). There is little research delineating whether older adult patients being treated for anxiety understand the dangerous side effects of benzodiazepines or the correct usage of an as needed, or “prn,” anxiety medication. Furthermore, there is also a lack of knowledge as to whether these patients have been provided education on alternative non-pharmacological anxiety management techniques, creating the opportunity for further research studies on this topic.

Theoretical Framework

Imogene King is a well-known nursing theorist whose work is widely recognized today. King was a firm believer that humans alone should absolutely stand as the focus of nursing (Khowaja, 2006). She developed what is referred to as a conceptual system and felt nursing care should be based upon this system. She also affirmed that the goal of nursing is not just helping to cure illness, but to also play a role in preventing sickness and maintaining long term health

(Khowaja, 2006). She felt that human interaction with the environment is what ultimately defined health.

King established that there are three main aspects that should be encompassed in nursing care: personal systems, interpersonal systems, and social systems (Husband, 1988). The personal system includes the patient's: perceptions, body image, learning ability, and growth and development. The interpersonal system includes the patient's: interactions, communication, transactions with medical staff, stress level, and coping mechanisms. Lastly, the patient's social system entails: decision making, social status, power, organization, and authority. All three of these systems are based on the belief that each has a direct effect on a person's health and functioning and when in balance with each other, one is able to achieve functioning at their highest personal level (Calladine, 1996).

Living with anxiety can be incredibly difficult. Patients may have a fear of the unknown, unsure what the future will bring, or possess the fear of being criticized from those who do not understand that they are unable to control these feelings. King's conceptual system involving personal, interpersonal, and social systems are imperative to recognize while reviewing this study (Husband, 1988). Anxiety can dramatically affect these three systems. Anxiety can affect one's personal system by decreasing their ability to grow and capacity for learning. It can diminish their social system by inhibiting their ability to communicate with others, decrease functioning in society, and potentially alienate them from peers and previous friends. Lastly, the interpersonal system is often altered by increasing stress levels.

In assessing older adults' use and knowledge concerning nonpharmacological anxiety treatments, the potential to establish a greater balance between these three systems is plausible. A knowledge assessment allows health care providers to educate appropriately in order to fill in

these gaps. By examining which aspects of the conceptual system are most altered when a patient suffers from anxiety, specialized education and necessary treatment can be directed more specifically, as opposed to treating anxiety in a standardized way for all patients. By customizing treatments and increasing knowledge in anxiety management, health care providers can help these patients where they need it the most, whether it is personally, interpersonally, or socially. Furthermore, King also felt that setting mutually agreed upon goals between nurses and patients can facilitate functioning. Based on this ideal, after understanding the knowledge possessed by older adults concerning anxiety treatment, mutual goals can be set to foster improvements in understanding different treatment options that will ultimately increase the safety and effectiveness of anxiety treatment (Husband, 1988).

Purpose and Significance

The purpose of this research study is to determine the amount of knowledge possessed by older adults about anti-anxiety medications, specifically benzodiazepines, as well as alternative nonpharmacological anxiety management techniques. In addition, this study will assess the effectiveness of specific pharmacological and nonpharmacological treatments. The significance of this study is to determine whether other adults are being educated properly on how to effectively manage anxiety with nonpharmacologic interventions. This will be highlighted by assessing their knowledge of benzodiazepines and other non-pharmacological anti-anxiety treatments. This research will draw attention to areas that have not been emphasized by health care professionals treating these patients. When these specific areas are brought to light following a knowledge assessment, interventions that alter the education provided to patients ideally will be implemented.

Statement of Problem

This study will specifically seek to answer the questions: *What knowledge do older adults possess concerning benzodiazepines and other anxiety management options?, and What is the potential impact of non-pharmacological treatment?* The objective of this study is to further understand the knowledge possessed by older adults concerning anti-anxiety medication and alternative treatment options. Assessing this will allow for health care professionals to understand where there gaps in knowledge are on this topic. In turn, this will lead to increased health teaching in these areas. Ideally, after receiving proper education, patients will understand that they do not need to rely solely on anxiety medications for treatment, and that there are other non-pharmacological options for this clinical problem. By evaluating and increasing knowledge concerning proper benzodiazepine use and dangerous side effects, older adult patients may desire to become less reliant on these medications. It is hypothesized, based on personal clinical experience, older adults possess little to no knowledge concerning nonpharmacological anxiety management options. It is also hypothesized that older adults with a moderate to severe anxiety level, scored using the GAD-7, rely more on medication to treat anxiety as opposed to nonpharmacological treatments. Furthermore, it is postulated that older adults that have minimal to mild anxiety level find non-pharmacological anxiety management techniques more effective. Lastly, it is hypothesized that those who take a higher number of routine anxiety medications feel that nonpharmacological treatments are less effective.

Definition of Terms

It is imperative when reviewing this research study that a few specific terms require definition. Anxiety is delineated as persistent worries, which are excessive and difficult to control. If severe, anxiety may lead to psychological and physical symptoms (Roberge et al., 2015). Pharmacological treatment refers to anxiety that is treated with medication.

Nonpharmacological treatment entails managing anxiety without medication.

Nonpharmacological treatment is often referred to cumulatively as psychotherapy and includes: cognitive behavior therapy, relaxation training, and supportive therapy (Koychev et al., 2016).

Cognitive behavior therapy includes: education about anxiety, self-monitoring, relaxation training, exposure to anxiety provoking thoughts and situations using systematic desensitization, and cognitive restructuring (Ayers et al., 2007). Relaxation training involves progressive muscle relaxation, deep breathing, meditation, and education about tension and stress (Ayers et al., 2007).

Supportive therapy engenders reflective listening and validation of feelings (Ayers et al., 2007).

Benzodiazepines are a widely prescribed sedative hypnotic. This class of medications is used mainly to decrease anxiety, promote sedation; they can also be used as muscle relaxants. These medications are incredibly addictive and dependence can develop after just a few weeks of continuous usage. As a result, these medications are not often advised for long term use (Arcangelo & Peterson, 2013). It has been proven that limiting the use of benzodiazepines and substituting other treatment modalities in the older adult population, has a positive effect on the level of anxiety (Koychev et al., 2016). Knowledge of these specific definitions and variables will be measured using a survey.

Overview of Methodology

The participants in this study were adults who are 55 or older who have recognizable feelings of anxiety at least once a month for the last year. A diagnosis of generalized anxiety disorder was not necessary for participation. The participants were given a 28 question multiple choice survey. Question 1 ensured that the participant consented to the survey. Questions 2 and 3 were disqualifier questions that ensured that the participant met the inclusion criteria for the survey.

The next 7 questions included the GAD-7, which measures the presence and severity of Generalized Anxiety Disorder. This tool was developed by Spitzer et al. and it was published in 2006. Although the copyright is held by Pfizer Incorporated, the questionnaire is free to use without permission (Williams, 2014). The last 18 questions of the survey were self-developed by this researcher. Shahar et al. (2016) emphasizes how effective exercise and relaxation are in reducing anxiety levels. Therefore, it is important to assess participants' use and knowledge of these alternative anxiety treatments. Bazin et al. (2012) highlights that using benzodiazepines can decrease one's motivation to perform activities of daily living, participate in daily exercise, and perform mentally stimulating activities such as reading and solving puzzles. Zweers et al. (2016) focuses his research on the importance of therapy and communication in treating anxiety.

The number of prescribed benzodiazepines used was assessed in this survey to examine whether participants who take an increased number of these medications engage less in nonpharmacological treatments. Demographic questions including sex and age are imperative in order to highlight trends based on these characteristics. The survey also assesses the use and perceived effectiveness of specific non-pharmacological anti-anxiety techniques. The survey was available through "Survey Monkey," an online research site, with participants who were voluntary and willing to participate anonymously. Information concerning the study was presented on a cover page prior to taking the survey. This cover page explained the purpose of the research study, including its potential risks and benefits. It also explains the inclusion criteria and requests participation only from those who meet inclusion criteria. The cover page stated that if the participant would like to be part of the study, to proceed to the next page and answer "Yes" to the question that asked if they agree to the terms of the study and are willing to answer the questions in the survey. Answering "Yes" to this question represented consent from the participant to be a part of the study. Although any participant was welcome to withdraw from the

survey at any time, once it was submitted, they could no longer retract their participation. This was due to the fact the data was anonymous and it was impossible to identify one person's specific survey once submitted. There was minimal risk to the participant since the participant is taking an anonymous survey and the study did not involve treating or testing of the participant. A potential risk was that the survey focuses on the sensitive topic of anxiety and could potentially elicit negative feelings.

A typical descriptive research design was employed for this study. This design is specifically appropriate to assess a noted area of concern, in this case a potential lack of knowledge in a specific area. There are no independent or dependent variables in a typical descriptive study; however, knowledge of anxiety treatments and benzodiazepines, defined conceptually above, stand as the research variable, which were measured through an anonymous survey. The sample size consisted of 59 participants. This sample is acceptable in size since 40 participants is the minimum acceptable for data concerning a single variable to approach a normal distribution (Grove, Burns, & Gray, 2013). A power analysis is not needed to determine sample size in this study because it is not of the correlational, quasi-experimental or experimental design, and the study size was predetermined by guiding faculty. Data was analyzed using the program SPSS. Descriptive statistics revealed central tendencies, dispersions, as well as relative frequencies.

Assumptions

This research study is based on three assumptions. First, it was assumed that all of the participants have received some type of unspecified treatment for their feelings of anxiety. It was also assumed that a majority of this population uses pharmacologic anxiety treatments, yet continue to experience anxiety. It was assumed that non-pharmacologic treatments can be as effective as pharmacologic treatments of anxiety. It was also assumed that knowledge about

anxiety and its treatment can be effectively assessed using an anonymous questionnaire. The last assumption was that the patient's being examined are able to recall which anxiety management tactics they have previously tried and the effectiveness of these treatments.

Limitations

This research study had several limitations. Due to limited time and resources, the sample size is small and the period of data collection was restricted to one month. Therefore, the data retrieved may not accurately reflect the entire population's utilization and knowledge of the surveyed anxiety treatments. Furthermore, the data collection tool was posted on Survey Monkey. Because participation was anonymous through this website, it is impossible to ensure that all participants met inclusion criteria. Survey Monkey may also have unintentionally narrowed the population to those who are comfortable and savvy with computer access and utilization. Another limitation was that the data collection tool was a self-report survey. Selfreport can obtain unintentional bias, skewing the data. Lastly, this research study was limited by the inexperience of the researcher. However, this was combated by the knowledge and experience of the research study's committee chair and second reader.

Summary

Chapter 1 discusses the prevalence of anxiety in the older adult population and complications that arise from untreated anxiety. It also delineates obstacles in diagnosing anxiety in the older adult population despite the known prevalence. Chapter 1 highlights the dangers of benzodiazepines, a commonly used anxiolytic. It continues by clearly stating the research questions: *What knowledge do older adults' possess concerning benzodiazepines and other antianxiety management options?, and What is the potential impact of non-pharmacological treatment?.* This will help determine whether the older adults are being educated properly on how to effectively manage anxiety with non-pharmacologic interventions. A review of relevant

terms helps define necessary concepts imperative in this research study. An overview of the methodology explains that there will be a voluntary survey with two components utilized in this study, which will be available on Survey Monkey voluntarily for eligible participants. The study used a typical descriptive research design. The first survey assessed the level of anxiety experienced by the participant and the second assessed their knowledge and experience with several anxiety treatments. Chapter 1 concluded by examining assumptions associated with this research study and asserting the premise for this study. Chapter 2 consists of a literature review, identifying the state of research on this topic and gaps in current research. Chapter 3 outlines the methodology used in this study. Chapter 4 presents the results of the data analysis and an interpretation of the findings and statistics. Chapter 5 serves as a conclusion that also includes: limitations, discussion of findings in light of published literature, implications for practice, and recommendations for further research.

Chapter 2: Review of Literature

A literature review was conducted to affirm what information had already been found concerning the older adults and anxiety. This included, but was not limited to, manifestations of anxiety in the older adults and treatment. Although anxiety in the older adults has been denoted as a common occurrence, research concerning this topic continues to be limited.

Search Strategy

A complete search of the literature was conducted. Using the Daemen library website, also called the Wildcat search engine, search terms including “Nursing, Health, and Fitness,” “anxiety and elderly,” “anxiety in elderly,” “benzodiazepines and anxiety,” “treatment of anxiety in elderly” and “benzodiazepines and elderly,” were all entered as search terms in the database. The results were then reviewed one by one for content as well as full text availability. The same search method was also conducted using the CINAHL database. Research studies most appropriate to the focus of this investigation were included.

Results

The prevalence of anxiety in the adult population has been noted in previous research. Ismail et al. (2015) explored, through a quantitative cross sectional research study, the prevalence of anxiety symptoms in older adult with hypertension as well as factors associated with this anxiety. More specifically, they noted that of the 398 participants, 13.3% had anxiety symptoms. Patients with depression were more likely to have anxiety symptoms. Living arrangements also had a direct correlation in the presence of anxiety symptoms. Those who lived alone were more

likely to possess anxiety symptoms than those who did not. Furthermore, those with a history of a stroke were found to be four times more likely to have anxiety compared to those who have not suffered from a stroke (Ismail et al., 2015). Similarly, Kathika & Anand Pratap (2016) used a cross sectional research study to evaluate anxiety level and its impact on quality of life among the urban older adult population. They also assessed the pattern of covert and overt anxiety among the older adult population. They focused on the relationship between anxiety and quality of life, and gender differences on the pattern of anxiety and quality of life in the older adult population. They defined covert anxiety as feeling of anxiety that are internalized and kept from others and overt anxiety as anxiety that is externalized and therefore can be seen by others. They referred to quality of life, as it has been defined by the World Health Organization, as having four domains: physical health, psychological health, social health, and environmental health (Kathika & Anand Pratap, 2016). They found through a quantitative research study, that covert anxiety is greater in males where overt anxiety is greater in females. Those with a lower anxiety level were found to have a higher level of physical and mental health. Males with a lower anxiety level were found to possess a higher level of social health; however in females, anxiety and social health were not associated. Females found to have a lower level of overt anxiety were noted to have a higher level of environmental health. However, female covert anxiety did not have any effect on environmental health. Anxiety in males also had no effect on this health domain (Kathika & Anand Pratap, 2016).

Benzodiazepine use in older adults has been explored extensively. Bazin et al. (2012) delineated the association between leisure activities (recreational, mental, physical, productive, and social) and the use of benzodiazepine drugs among community-dwelling older adult patients. They concluded in a quantitative cross sectional research study, that benzodiazepine users were more frequently women, in poorer health than non-users, more likely to have moderate to severe

disabilities, and more frequently visited their general practitioner. They also noted that benzodiazepine users were more likely to suffer from frequent feelings of anxiety. Furthermore, they concluded that benzodiazepine use was associated with behaviors such as participation in mental activities such as reading, doing puzzles, or playing games, less than twice a week. Use was associated with no participation in physical activities, less than 2 hours per day of productive activities including cleaning, cooking, and performing activities of daily living, and an increased participation of recreational activities defined as more than 2 hours per day (Bazin et al., 2012). It was also noted by Capone & Raetz (2015) in a systematic review of randomized controlled trials, that despite the effectiveness of benzodiazepines in treating anxiety, the adverse effects of these medications outweighed the benefits in the older adult population (Capone & Raetz, 2015).

Following suite, Dionne et al. (2013), noted the prevalence of potentially inappropriate benzodiazepine prescriptions and potential for drug-drug interactions in the older adult population. They also tabulated the excess health care costs related to these prescriptions in a retrospective quantitative research study. They found that in the year following their first prescription, 9% of benzodiazepine users had at least one emergency room visit, 20% had one or more admissions to the hospital, and 68% had eight or more outpatient appointments (Dionne et al., 2013). Those who had potentially inappropriate prescriptions were more likely to fall into one of these categories. Furthermore, 22% of benzodiazepine prescriptions were deemed potentially inappropriate and 15% were susceptible to drug-drug interactions. The most commonly prescribed benzodiazepines that were classified as inappropriate were clonazepam and temazepam. Those who classified as receiving an inappropriate prescriptions were found to have a lower income, worse medical and mental health, and the presence of three or more chronic conditions. These participants were also more likely to use these prescriptions more than 90 days throughout the year. The mean annual health care cost for all participants were found to

be \$6,840/year. Those who had potentially inappropriate prescriptions had higher annual health care costs (Dionne et al., 2013).

The excessive use of benzodiazepines is also illustrated by Juan et al. (2016). Through a quantitative community-level transversal observational study, 20.5% of participants reported taking psychotropic medications. Benzodiazepines were reported as the most commonly used psychotropic medication. Anti-psychotics on the other hand were the least common type of medication reported in this class. It was found that the use of psychotropic medications increased with women, particularly women who were divorced, those with diagnosed depression, cognitive deterioration, and dependence on others to complete activities of daily living. Furthermore, those who reported taking psychotropic medications had a higher number of health related problems in comparison with those who did not take these medications (Juan et al., 2016).

Non-pharmacological anxiety management techniques have been studied extensively in previous research. There have been many techniques that have been proven to be incredibly successful in managing anxiety. Shahar, Ramli, & Adam (2016) studied the effectiveness of dance therapy as opposed to relaxation therapy in improving functional activities and anxiety levels in older adults with cognitive impairment in a quantitative quasi-experimental research study. Anxiety levels were measured using the Hospital Anxiety and Depression Scale. The Timed up and Go Balance Test was used to determine functional balance. These items were measured at baseline, 3 weeks, and 6 weeks of the intervention. The participants were divided into two groups. One group just received relaxation therapy two times a week for six weeks and the other received 10 minutes of warm up and stretching, 20 minutes of Poco-Poco dance, and 30 minutes of relaxation therapy after dance twice a week for six weeks. They found that all subjects with anxiety had a decreased level of anxiety following six weeks of dance and relaxation therapy. Almost all of the participants following the six weeks had a normal anxiety

level with only 4% with borderline anxiety. All participants with normal depression had a decrease in depression following the six weeks of dance and relaxation therapy. However, only 50% of participants who only received relaxation therapy on the other hand had a decrease in depression or anxiety to a normal level. Balance increased tremendously in all participants who received dance and relaxation therapy. Balance did not improve in a majority of those who only received only relaxation therapy (Shahar et al., 2016).

On a similar note, focusing on non-pharmacological anxiety management, Elham et al. (2015) explored the benefits of spiritual and religious intervention on spiritual well-being and anxiety in older adults admitted to the critical care unit in a hospital in Iran. They found that those receiving spiritual and religious intervention for at least three days, had a significant increase in their spiritual well-being. On the other hand, in the control group, those who did not receive spiritual and religious intervention, spiritual well-being did not significantly increase during their hospital stay. Identified anxiety remained constant in the control group, but decreased in the group that received spiritual and religious intervention. Identified anxiety also decreased in the group that received the intervention but did not significantly change in the control group (Elham et al., 2015).

Zweers et al. (2016) found through a quantitative systematic review of randomized controlled trials that many non-pharmacological methods were effective in decreasing anxiety in advanced cancer patients. Four non-pharmacological interventions were assessed singularly and in combination including; patient education, telemonitoring, psychotherapy, and complimentary care. Psychotherapy included progressive muscle relaxation. Complimentary care involved aromatherapy and massage. Education focused on procedures, medications, side effects, and specific factors relating to the patient's disease process and treatment. Telemonitoring helped the patient's express themselves through creative writing and a focused narrative interview.

Telemonitoring combined with education was effective in decreasing anxiety levels after six months of this intervention. Also, psychotherapy combined with patient education concerning a specific radiotherapy procedure was more beneficial in decreasing anxiety than just education alone. It was noted that there were no long term decreases in anxiety with patients who received aromatherapy and massage, but this treatment modality did have immediate short term decreases in anxiety levels following these interventions that were not sustained. Focused narrative interviews were not noted to decrease anxiety levels (Zweers et al., 2016).

Ho, Yeung, & Kwok (2014), reinforced that anxiety can be treated nonpharmacologically by demonstrating the effects of positive psychology intervention in decreasing anxiety. Positive psychology intervention focused on eight themes including: optimism, gratitude, savoring, happiness, curiosity, courage, altruism, and meaning of life. Through a quasi-experimental quantitative study, they noted that following positive psychology intervention, participants had a much lower level of depression, significantly higher life satisfaction, and subjective happiness. It was also found that the positive psychology intervention increased participant's gratitude towards life. The effectiveness of positive psychology interventions was felt to be attributed to the focus of: self-awareness, self-reinforcement, and education (Ho et al., 2014).

Synthesis of Literature

From the literature review, it can be concluded that anxiety is a common problem in the older adult population. It is prevalent in a notable percentage of the population and can have a drastic effect on one's life. Understanding precipitating factors, such as living alone, which can contribute to the development of anxiety is imperative for all health care professionals (Ismail et al., 2015). Recognizing those elders that may be at a higher risk of developing anxiety can lead to a more thorough and careful screening of these patients.

The use of benzodiazepines to treat anxiety in the older adults is also noted as a common practice despite the fact that they are noted to have many adverse effects in this population. Those that use these medications have been proven to participate in less physical activity and more sedentary activity, leading to a more rapid decline in health (Bazin et al., 2012). Furthermore, it is noted that some health care professionals at times prescribe these medications inappropriately (Sheikh et al., 2000). This means that they are sometimes prescribed without considering other alternatives, or for different conditions that may be more accurately treated using a different medication. This shows that the prescription of benzodiazepines needs to be more carefully controlled by health care professionals.

It has been proven that many non-pharmacological anti-anxiety techniques are beneficial in decreasing anxiety. This illustrates that it is not imperative to use only benzodiazepines to treat anxiety. It is proven that certain non-pharmacological techniques are not only safer but also just as effective. Highlighting this research can help health care professionals take a multi-faceted approach to treating anxiety in the older adults. Where many may not have considered nonpharmacological treatment as appropriate treatment, evidence has proven otherwise. This has the potential to drastically change health care professional's anxiety screening techniques and treatment modalities.

Research Gaps

When considering the following research, there are many noted gaps in the literature. Although the prevalence of anxiety and benzodiazepine use in the older adult population has been studied, their knowledge of appropriate benzodiazepine use and side effects has not been noted. There has been research illustrating the positive outcomes of non-pharmacological anxiety treatments, but there is a lack of research noting whether the older adult population is aware of these treatments. Literature assessing the older adults' knowledge concerning both

pharmacological and non-pharmacological anxiety management methods would appear to be incredibly beneficial in treating these patients. It is possible that patients are not attempting to treat their anxiety in a multi-faceted approach due to a lack of knowledge about other additional interventions that may be helpful. It is also likely that many patients rely on or over use benzodiazepines because they have not received proper education on the addictive properties and potential adverse effects. This knowledge may make them more active participants in their choice of anxiety management. This assessment would also highlight the areas where more health teaching is required, to ensure that older adult patients being treated for anxiety possess an adequate knowledge base regarding treatment options.

By assessing the knowledge level of older adults and use of non-pharmacological anxiety management techniques, proper education can be provided if there is a lack of knowledge noted. This will ultimately lead to safer treatment of anxiety in the older adult population. Lastly, although many successful non-pharmacological anxiety management techniques were highlighted in the literature reviewed, there is no research discussing whether these techniques, if initiated as soon as the patient is diagnosed with anxiety, halted the progression of mild to moderate or severe anxiety. It is important to understand whether non-pharmacological anxiety management techniques help manage anxiety short term or help effectively treat anxiety so that it never progresses beyond the mild stages. This could drastically affect and change how anxiety is treated in the older adult population.

Research has highlighted that older adults suffering from anxiety are negatively affected in all four domains of health including mental, physical, environmental, and psychological, which drastically alters their quality of life (Kathika & Anand Pratap, 2016). Specific nonpharmacological treatments including relaxation therapy and dance were used to treat anxiety in cognitively impaired older adult patients. When used in combination, these two treatments

were found to be incredibly effective in decreasing anxiety in this specific group (Shahar et al., 2016). Furthermore, patient education, telemonitoring, psychotherapy, and complimentary care were found to be effective in decreasing end of life anxiety in late stage cancer patients (Zweers et al., 2016). Research has also shown that despite the success of non-pharmacological anxiety treatments, benzodiazepines are still used regularly (Bazin et al., 2012). In addition, they continue to negatively affect the older adult population, as research notes that older adults using benzodiazepines to treat anxiety participate in less physical and purposeful activity which could lead to an accelerated decrease in independence (Bazin et al., 2012).

Anxiety management in the older adults is a topic that is applicable in both primary and acute care settings. As noted, it is one of the most common mental health diagnosis in the older adult population (Koychev & Ebmeier, 2016). Although anxiolytic medications are the gold standard of treatment for the older adult population, research has shown that nonpharmacological methods are also effective in decreasing anxiety levels in a multitude of different circumstances (Kolar & Kolar, 2016). An increase in non-pharmacological methods has the potential to drastically increase the quality of life in older adult patients suffering from anxiety.

Summary

Chapter 2 provided a review of the literature. The prevalence of anxiety in the older adult population was highlighted initially. Koychev & Ebmeier (2016) stressed that anxiety is one of the most common mental health issues in the older adult population. Next, prior research concerning benzodiazepine use in older adults was explored. Bazin et al. (2016) concluded that women are more likely to use benzodiazepines. Furthermore, benzodiazepine users were noted to have poorer health than non-users, more likely to have moderate to severe disabilities, and more frequently visit their general practitioner. They also noted that benzodiazepine users were more likely to suffer from frequent feelings of anxiety (Bazin et al., 2016). Dionne et al. (2013) noted

in their research that 22% of benzodiazepine prescriptions were deemed potentially inappropriate. Those who classified as receiving inappropriate prescriptions were found to have a lower income, worse medical and mental health, and the presence of three or more chronic conditions. This illustrates the negative factors associated with inappropriate benzodiazepine prescriptions. Finally, prior studies concerning nonpharmacological anxiety management techniques were reviewed to determine effectiveness. Shahar et al. (2016) studied whether dance and relaxation therapy were successful in decreasing anxiety levels. It was found that the combination of both decreased anxiety levels in all participants (Shahar et al., 2016). In addition, Ho, Yeung, & Kwok (2014), reinforced that anxiety can be treated successfully with positive psychology intervention. Chapter 3 will provide an in depth discussion concerning the methodology of the study including the setting, population, data collection tool, and data analysis procedure.

Chapter 3: Methodology

Chapter 3 includes a presentation of the methodology utilized in this research study. This chapter includes a discussion involving the choice of population and setting. It also explains how Human Rights Assurance is maintained. The chapter continues with an explanation of the research tool, data collection method, and procedure used in the study. It concludes with a discussion of how the collected data will be analyzed.

Setting

A specific setting was not required for this research study. The data was collected through an anonymous survey posted on a public website entitled Survey Monkey. By posting the survey on a website that is accessible worldwide it ensured that the data was not biased by a specific geographical location.

Population

This research study focused on the older adult population. Therefore, inclusion criteria included a strict age limitation. Inclusion criteria was explained in a cover letter that was presented prior to the survey. Voluntary participants on Survey Monkey were required to be at least 55 years of age in order to participate in the survey. It was also requested that they only participate if they have experienced recognizable feelings of anxiety at least once a month for the last twelve months. The cover letter explained that a diagnosis of Generalized Anxiety Disorder is not required to participate in this study. If the participant met the inclusion criteria they could click on the “NEXT” button which would redirect them to the survey. If they did not meet the inclusion criteria, they were instructed to click the back arrow which would bring them to the page they were on prior to reading the cover letter. There was no specific exclusion criteria for this study. As long as the participants met the inclusion criteria they were welcome to participate.

Human Rights Assurance

The study was presented to the Daemen College Human Subjects Research Review Committee through an expedited review form. Approval from the committee was received prior to any data collection. No recruitment was necessary. Anyone on the public website of Survey Monkey was able to read the cover letter explaining the survey. The cover letter explained that there was no identifying information requested in the survey, therefore all participants remain anonymous. It also stated that the survey would take approximately ten to fifteen minutes to

complete. The cover letter continued to explain the potential risks and benefits associated with the study. It explained that participation may lead to a decreased reliance on anxiety medications as well as an increased proficiency in non-pharmacologic treatment options. It also asserted that the risks associated with the study were minimal; however, since anxiety is a sensitive subject, it has the potential to elicit negative feelings while answering questions concerning this topic. To address this potential risk at the end of the survey, there was contact information for the National Alliance on Mental Illness (NAMI) Helpline to discuss negative feelings that may have developed as a result of this survey. Information concerning the “Anxiety Free” app for smartphones that helps induce relaxation and peaceful thoughts was also included. At the end of the cover letter the participant was asked to give consent to participate in this survey by answering “YES” to the question at the bottom of this screen that states, “Do you agree to the above terms? By clicking Yes, you consent that you are willing to answer the questions in this survey.” Answering “YES” to this question represented understanding of the potential risks and benefits of the survey and demonstrated consent of the participant. The participant was also instructed in the cover letter that they can withdraw from the study at any time before the survey has been submitted by clicking on the “EXIT” link in the top right corner of the survey. The cover letter instructed that there was no penalty for opting to not complete the survey. However, once the survey has been submitted, there is no way to withdraw participation. This is due to the fact the data is anonymous and it was impossible to identify one person’s specific survey once submitted.

Data Collection

Data was collected through a self-reported survey on the website Survey Monkey. All questions were multiple-choice format. The tool was comprised of 28 questions (Appendix B).

The collected data was stored on the Survey Monkey website and was only available with a specific username and password.

The tool was prefaced with a cover letter (Appendix A) and a question that requested consent from the participant, which was numbered Question 1. Questions 2 and 3 ensured that the participant met the inclusion criteria by asking if they were at least 55 years of age and have experienced recognizable feelings of anxiety at least once a month for the last year respectively. An answer of “No” to either question disqualified the participant and brought them to the disqualification page at the end of the survey. The next 7 questions of the tool include the GAD7, a widely used self-reported assessment of anxiety developed by Spitzer et al. (2006). Although Pfizer Incorporation holds the copyright for this tool, it is available for public use and therefore permission was not required (Williams, 2014). The GAD-7 asks the participant how often they have experienced specific feelings or behaviors in the last two weeks. Specifically, these questions address feelings of restlessness, nervousness, worrying, irritability, and irrational fear. The answer choices are: not at all, several days, more than half the days, and nearly every day. As per Survey Monkey regulation, an answer choice of “prefer not to answer” was also included for each question. Not at all is equivalent to 0 points, several days is scored as 1 point, more than half the days as 2 points, and nearly every day as 3 points. If the participant chose “prefer not to answer,” their answers to questions 4-10 were not included in the analysis, since the severity of anxiety would not be accurate. The scoring system is numerical and is suggested as an indication of anxiety as follows: 0-4 =minimal anxiety, 5-9= mild anxiety, 10-14= moderate anxiety, 15-21= severe anxiety. This anxiety assessment was imperative to include in the data collection tool to assess the severity of the participant’s anxiety level in correlation with the knowledge assessment of anxiety management techniques. The GAD-7 has been proven to be highly sensitive and specific. Employing a cut off score of 10 or greater, the GAD-7 has sensitivity of 89% and

specificity of 82% for detecting generalized anxiety disorder. It also is effective in screening for more specific types of anxiety. For example it is 74% sensitive and 81% specific in detecting panic disorder, 72% sensitive and 80% specific in detecting social anxiety disorder, and 66% sensitive and 81% specific in detecting post-traumatic stress disorder (Williams, 2014).

The next sixteen questions, questions 11 through 26, were developed by this researcher with the purpose of examining different anxiety treatments used by the participants in this study, as well as determining their perspectives on the effectiveness of these treatments, and knowledge of these treatments. Each specific anxiety treatment technique is analyzed with three subsequent questions. The first treatment assessed is “as needed” benzodiazepine usage. The first question concerning the topic, question 11, asks how often the participant uses this specific medication class to treat anxiety. Options to this question are: never, 1-2 times a month, 1-2 times a week, 3-4 times a week, once a day, more than once a day, or prefer not to answer. Question 12 asks how effective they feel this treatment is with answer choices standing as: not applicable because not used, not effective at all, mildly effective (relieves a little anxiety), moderately effective (relieves most anxiety), very effective (completely relieves anxiety), and prefer not to answer.

Question 13 assesses whether the participant is knowledgeable of this treatment as an option although it is not currently utilized to treat their anxiety. The answer choices for question 13 are: yes, no, not applicable- I have used this treatment, or prefer not to answer. Following suit, the next twelve questions focus on a single topic per three questions. Each topic has the same answer choices as described above for questions 11-13 for the respective question. Questions 14 through 16 assess exercise to treat anxiety. Questions 17 through 19 evaluate distraction techniques such as television and radio to treat anxiety. Questions 20 through 22 examines single or group therapy as a way to decrease anxiety levels. Questions 23 through 25 asks about open communication with friends and family concerning feelings of anxiety. Question 26 is a single

question that asks how many different anxiety medications the participant is on. It is necessary to assess this variable because the number of medications the participant takes may alter how effective other anxiety treatments are.

Questions 11, 14, 17, 20, and 23 present the same answer choices. They were scored as 0 points for never, 1 point for 1-2 times a month, 2 points for 1-2 times a week, 3 points for 3-4 times a week, 4 points for once a day, and 5 points was assigned to the answer more than once a day. Questions 12, 15, 18, 21, and 24 include the same answer choices and were scored as follows: 0 points for not applicable because not used, 1 point for not effective at all, 2 points for mildly effective (relieves a little anxiety), 3 points for moderately effective (relieves most anxiety), and 4 points was given for the answer of very effective (completely relieves anxiety). Questions 3, 16, 19, 22, and 25 all have the same answer choices. Zero points were assigned to the answer choice of not applicable because not used, 1 point for no, and 2 points for yes. Question 26 is unique in its answer choices and was scored as 0 points for no medications, 1 point for 1 medication, 2 points for 2 medications, 3 points for 3 medications, 4 points for 4 medications, and 5 points for 5 or more medications. For questions 11-26, if the participant answered, "prefer not to answer," that specific question was not included in analyzation. The higher the score, the increased knowledge and/or experience with the particular treatment approach being queried.

The last two questions, question 27 and 28, assess demographic data. Question 27 asks the participant's age in years in a multiple-choice format. The answer choices are age ranges so that the participant does not need to disclose their actual age. The age ranges provided are: 55-59, 60-64, 65-69, 70-74, 75-79, and 80 or older. Question 28 asks whether the participant identifies as a male or female. For the analysis, 1 point is given to 55-59, 2 points for 60-64, 3 points for 65-69, 4 points for 70-74, 5 points for 75-79, and 6 points for 80 or older. For question 25, the

answer male was assigned one point and the answer female 2 points. Both of these questions also possess a “prefer not to answer option.” If this answer choice was selected, the specific question was not included in the analysis.

Data Analysis

Data was organized and analyzed by SAS Version 9.4 to determine trends and correlations. Data revealing gender and age were organized using descriptive statistics. Measures of central tendencies, including the mean, median and mode, were tabulated to further examine the age characteristics of the sample. Central tendencies were also used to evaluate the number of anxiety medications taken by participants. The chi-square test was used to compare the perceived effectiveness of each treatment evaluated as well as the number of anxiety medications taken compared with each non-pharmacological treatment option. This test is appropriate for this study since it is used to compare the relationship between two variables. Descriptive statistics were used to examine the relationship between participants’ anxiety levels according to the GAD-7 and effectiveness of surveyed anxiety treatment options. Descriptive statistics were also used to assess the participants’ knowledge of surveyed anxiety treatment options.

Summary

Chapter 3 provides an in depth explanation of the methodology applied in this research study. More specifically this chapter discusses the setting and population and provides an in depth examination of Human Right’s Assurance. The chapter continues by discussing the specific mechanisms of data collection, a complete description of the data collection tool, and a brief explanation of statistical tests employed to examine and evaluate data obtained. Chapter 4 will include a full discussion and analysis of the data obtained from this study.

Chapter 4: Data Analysis

Chapter 4 provides a detailed explanation of the findings associated with this study. The results from the 59 participants that took the survey described in Chapter 3 were analyzed using descriptive statistics and the chi-square test. The results are presented in this chapter using tables followed by narrative explanations. First, demographic data is examined, then anxiety levels are analyzed. This chapter concludes by exploring the results associated with anxiety treatment options.

Demographic Data

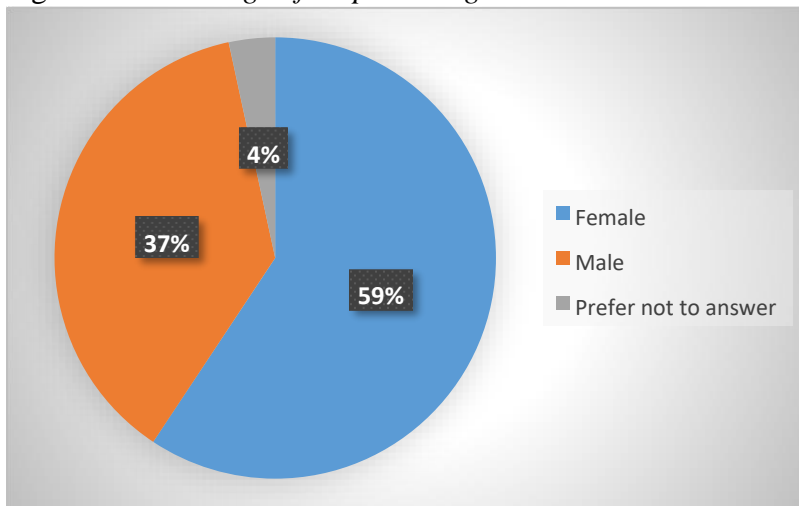
Fifty-nine people completed the entire 28-question data collection tool. Thirty-five of these participants, or 59.3%, identified themselves as female and 22, or 37.3%, identified

themselves as male. Two participants, or 3.4%, stated that they preferred not to answer this question.

Table 1. *Frequency and percentage of respondent gender*

Gender	Frequency	Percentage
Female	35	59.30%
Male	22	37.30%
Prefer not to answer	2	3.40%

Figure 1. *Percentage of respondent gender*



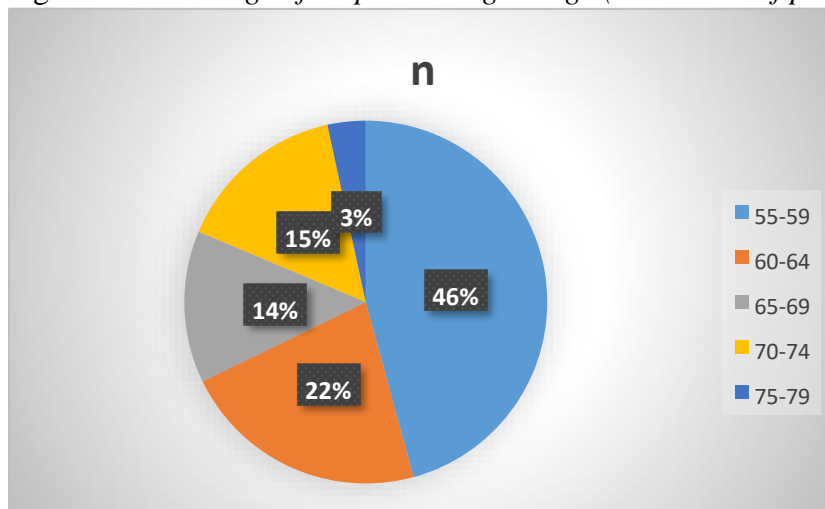
Twenty-seven participants were between the ages of 55-59 completed the survey, meaning that almost half of the participants involved in this survey fell into this age group.

Subsequently, 13 participants between the ages of 60-64, 8 participants between the ages of 65-69, 9 participants between the ages of 70-74, and 2 participants between the ages of 75-79

completed the survey. The mean age range of participants was 60-64. In addition, the median age range was also between 60-64. However, the mode age range was 55-59. Table 2. *Frequency and percentage of respondents age range*

Age Range	Frequency	Percentage
55-59	27	45.80%
60-64	13	22.00%
65-69	8	13.60%
70-74	9	15.30%
75-79	2	3.40%

Figure 2. *Percentage of respondent age range (n=number of participants)*



Anxiety Levels

Questions 4 through 10 assessed the participant’s anxiety level using the GAD-7, which classifies anxiety as minimal, mild, moderate, or severe based on the scoring system discussed in Chapter 3 (Spitzer et al., 2006). If any question in this seven-question sequence was skipped or answered with the answer choice of “prefer not to answer,” anxiety levels were not tabulated for that participant. Data from 57 out of 59 participants was used for this portion of the analysis.

Two participants choose not to answer at least one of these questions, and therefore their data for questions 4 through 10 were not usable. It was calculated that out of the 57 participants that 11 classified as having 11 minimal anxiety, 22 were found to have mild anxiety, 13 classified as moderate anxiety, and 11 suffer from severe anxiety.

Table 3. *Frequency and percentage of anxiety level*

Anxiety Level	Frequency	Percentage
Minimal Anxiety	11	19.30%
Mild Anxiety	22	38.60%
Moderate Anxiety	13	22.80%
Severe Anxiety	11	19.30%

It is notable that mild anxiety levels were the most common, with 38.6% of participants who were found to have mild anxiety. When cross-examining anxiety levels and gender, 42.9% of female participants possess mild anxiety levels and only 17.1 % suffer from severe anxiety. On the other hand, male participants were evenly distributed between the four levels of anxiety. Almost 29% (28.6%) of males were found to have mild anxiety, 28.6% found to have moderate anxiety, 23.8% found to have severe anxiety, and 19% of male participants classified as only having minimal anxiety. One participant selected “prefer not to answer” when asked their gender, which was not included when examining male verses female anxiety levels. As noted by

Kathika and Anand Pratap (2016), females are more likely to externalize anxiety and males are more likely to internalize their anxiety. Only 37.1% of females in this study were found to suffer from moderate to severe anxiety, where 52.4% of males reported that they suffer from moderate to severe anxiety. It is inferred based on these findings and the research done by Kathika and Anand Pratap that externalizing anxiety may cease or slow progression to moderate or severe anxiety levels (Kathika & Anand Pratap, 2016).

Table 4. *Frequency and percentage of anxiety level in females*

Female anxiety levels	Frequency	Percentage
minimal	7	20%
mild	15	42.90%
moderate	7	20%
severe	6	17.10%

Table 5. *Frequency and percentage of anxiety level in males*

Male anxiety levels	Frequency	Percentage
minimal	4	19%
mild	6	28.60%
moderate	6	28.60%
severe	5	23.80%

Anxiety Treatment Options

This research study explored five anxiety treatment options: as needed anxiety medication, exercise, distraction through reading, television or music, therapy (group or

individual), and discussion with family or friends. Of the five treatments presented, distraction through television, music, or radio was the most commonly used treatment. Unexpectedly, therapy and as needed medication were utilized the least. Only 32.2% of respondents stated that they use as needed medications to treat anxiety and only 30.5% attend therapy to help manage anxious feelings.

Table 6. *Frequency and percentage of anxiety treatments surveyed*

Anxiety treatment	Frequency	Percentage
Medication	19	32.2%
Exercise	41	69.5%
Distraction (television, music, radio)	55	93.2%
Therapy	18	30.5%
Discussion with family or friends	40	67.8%

Comparing the effectiveness of each treatment, 47.4% of those who used as needed medication responded that it was either moderately or very effective (p-value=not applicable). This result is not statistically significant from the 41.5% of those who responded that exercise was moderately or very effective (p-value = 0.294). However, when compared to distraction (pvalue=0.0478), therapy (p-value=0.0358), and discussion with family or friends (pvalue=0.0465), medication did show significant differences in the percentage of moderate or very effective outcomes. Only 30.9% found distraction moderately or very effective, 30% discussion, and only 27.8% reported therapy to be moderately or very effective. However, previous research illustrates therapy to be much more effective than noted in this study. Zweers et al. (2016) noted in a quantitative systematic review that psychotherapy combined with patient

education was much more effective in decreasing anxiety in end-stage cancer patients than just education alone. Ho et al. (2014) also reports the effectiveness of therapy on decreasing anxiety through a quasi-experimental quantitative study. They report that positive psychology intervention, a type of therapy, significantly decreased anxiety levels, increased life satisfaction, and significant happiness levels in participants.

Table 7. *Frequency and percentage of effectiveness of treatments surveyed (n=frequency)*

Anxiety treatments	Ineffective (n)	Mildly (n)	Moderately (n)	Very (n)	Not used (n)	% of Moderately/Very Effective
Medication	2	4	6	3	4	47.40%
Exercise	3	19	10	7	2	41.50%
Distraction (television, music, radio)	2	33	15	2	3	30.90%
Therapy	1	10	4	1	2	27.80%
Discussion with family or friends	6	19	8	4	2	30.00%

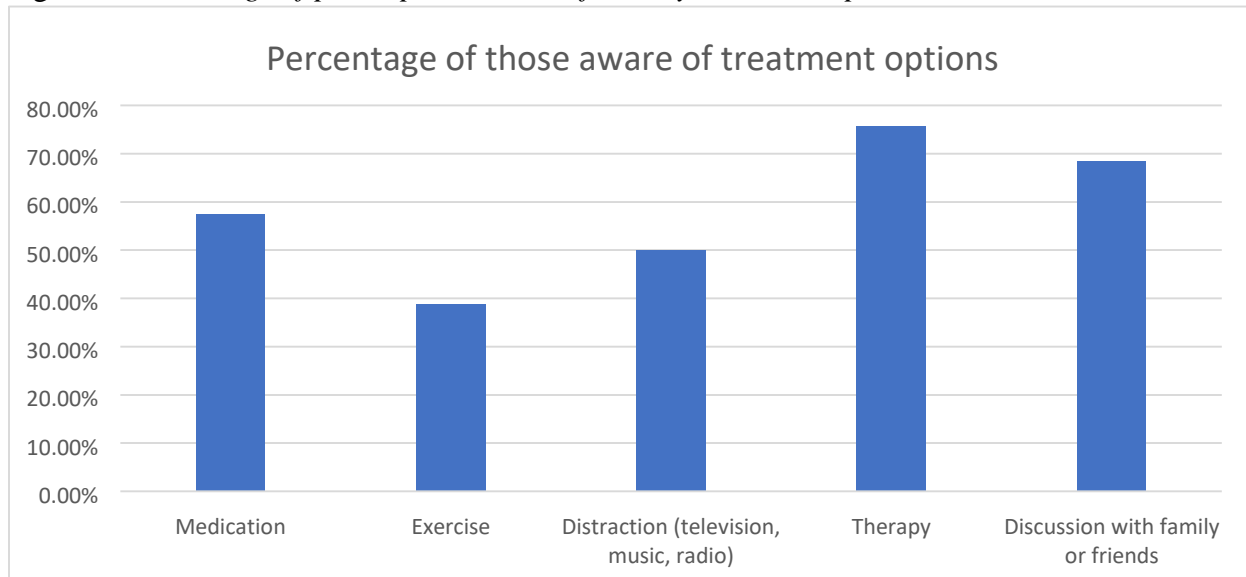
Next, participant's knowledge concerning the five anxiety treatments was explored. The data tool inquired, that if the participant was not using a particular treatment mechanism, if they were aware that it could be used as potential treatment. The majority of participants, 75.6%, were knowledgeable of therapy as a treatment option, where less than half had been taught that exercise can be used to decrease anxiety.

Table 8. *Percentage of participants aware of anxiety treatment options*

Anxiety treatments	Awareness of treatment options
Medication	57.50%
Exercise	38.90%
Distraction (television, music, radio)	50.00%

Therapy	75.60%
Discussion with family or friends	68.40%

Figure 3. *Percentage of participants aware of anxiety treatment options*



Next, the number of routine anxiety medications taken by each participant was examined to evaluate whether this altered their perceived effectiveness of non-pharmacological treatments. Unexpectedly, only 54.4% participants responded that they do not take any routine anxiety medications. Only 1.69% stated that they took four routine medications. The mode number of routine medications taken by participants is 0.74. The median number of routine medications is zero. Following suit, the mode number of routine medications is also zero. It is significant that 45.6% of participants in this study report taking routine anxiety medications. However, Dionne et al (2013) noted in a much larger community level quantitative observational study that only 20.5% of participants reported taking psychotropic medications to treat anxiety. As psychotropic medications are the first line pharmacological treatment for anxiety, it is likely that the small

sample used for this study is not representative of the entire population's use of routine anxiety medications.

Table 9. *Frequency and percentage of routine anxiety medications taken*

# of routine anxiety medications	Frequency	Percentage
0	32	54.24%
1	18	30.51%
2	2	3.39%
3	6	10.17%
4	1	1.69%
5 or more	0	0%

The number of routine medications taken was then compared with the four nonpharmacological treatments surveyed. A chi square analysis was performed on each specific treatment to examine if the distribution of the number of routine medications was different when employing a specific non-pharmacological treatment. There were no significant differences in medication use when also engaging in exercise (p -value= 0.5781) or distraction techniques (p value=0.8963). However, there was a significant difference in medication use when used in combination with therapy (p -value = 0.0001) or discussion (p -value = 0.0231). Interestingly, all participants who reported using therapy to treat anxiety, all also reported being on at least one routine anxiety medication. These findings are supported by research conducted by Bazin et al.

(2012). Bazin et al. reported in a quantitative cross sectional study that those using benzodiazepine medications are less likely to participate in physical activity, mentally stimulating activities like reading or doing puzzles, or activities of daily living (Basin et al, 2012). This is consistent with the findings of this research study that illustrate that those who take more than one routine medication are far less likely to utilize exercise or distraction techniques such as reading or doing puzzles to help treat their anxiety.

Table 10. *The effectiveness of exercise versus routine anxiety medications*

Number of routine meds	Yes-exercise used		No-exercise not used	
	frequency	%	frequency	%
0	23	56.1%	9	50.0%
1	12	29.3%	6	33.3%
2	2	4.9%	0	0.0%
3	4	9.8%	2	11.1%
4	0	0.0%	1	5.6%

Table 11. *The effectiveness of various distractions as compared with anxiety medications treating anxiety*

Number of routine meds	<u>Yes-distraction used</u>		<u>No-distraction not used</u>	
	frequency	%	frequency	%
0	30	54.5%	2	50.0%
1	16	29.1%	2	50.0%
2	2	3.6%	0	0.0%
3	6	10.9%	0	0.0%

4	1	1.8%	0	0.0%
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Table 12. *The effectiveness of therapy versus routine anxiety medications*

Number of routine meds	<u>Yes-therapy used</u>		<u>No-therapy not used</u>	
	frequency	%	frequency	%
0	0	0.0%	32	78.0%
1	10	55.6%	8	19.5%
2	2	11.1%	0	0.0%
3	6	33.3%	0	0.0%
4	0	0.0%	1	2.4%

Table 13. *The effectiveness of discussion with family or friends versus routine anxiety medications*

Number of routine meds	<u>Yes-discussion used</u>		<u>No-discussion not used</u>	
	frequency	%	frequency	%
0	17	42.5%	15	78.9%
1	15	37.5%	3	15.8%
2	2	5.0%	0	0.0%
3	5	12.5%	1	5.3%

4 1 2.5% 0 0.0%

Lastly, when examining anxiety level according to the GAD-7 against treatment effectiveness, those with minimal or mild anxiety saw high percentages of moderate or very effective responses for exercise (p-value=0.0154), therapy (p-value= 0.0386) and as needed anxiety medication (p-value=0.0396). Sixty-three percent of those with minimal or mild anxiety found exercise moderately or very effective, 66.7% found therapy moderately or very effective and most notably, 85.7% with these anxiety levels found as needed medications moderately or very effective. On the contrary, distraction (p-value= 0.4215) and discussion (p-value= 0.2147) were only found to be 34.4% and 39.1% effective respectively in those with minimal or mild anxiety levels. No treatment had a greater than 50% response rate of moderate or very effective with moderate or severe anxiety levels. However, 44.4% of those with moderate to severe anxiety found as needed medication to be moderately to very effective.

Table 14. *Effectiveness of treatment verses anxiety level*

<u>Effectiveness of exercise</u>				
Anxiety level	Moderate/Very	%	None/Mild	%
Minimal/Mild	17	63.0%	10	37.0%
Moderate/Severe	1	9.1%	10	90.9%

<u>Effectiveness of distraction</u>				
Anxiety level	Moderate/Very	%	None/Mild	%
Minimal/Mild	11	34.4%	21	65.6%
Moderate/Severe	6	28.6%	15	71.4%

<u>Effectiveness of therapy</u>				
Anxiety level	Moderate/Very	%	None/Mild	%
Minimal/Mild	4	66.7%	2	33.3%
Moderate/Severe	2	18.2%	9	81.8%

<u>Effectiveness of discussion</u>				
Anxiety level	Moderate/Very	%	None/Mild	%
Minimal/Mild	9	39.1%	14	60.9%
Moderate/Severe	3	20.0%	12	80.0%

<u>Effectiveness of as needed medications</u>				
Anxiety level	Moderate/Very	%	None/Mild	%
Minimal/Mild	6	85.7%	1	14.3%
Moderate/Severe	4	44.4%	5	55.6%

Summary

Chapter 4 explains the results of the study through tables, charts, and written explanations. It describes how the data was organized and analyzed using SAS Version 9.4 software. Fifty-nine participants were included in the study. Distraction was found to be the most commonly used anxiety treatment method out of the five treatment options surveyed. However, as needed anxiety medication was reported by participants to be the most effective treatment mechanism surveyed. Ironically, although used the most frequently, by 93.2% of participants, only 30.9% reported that distraction is moderately or very effective in treating their anxiety. Participants not using a specific anxiety treatment were surveyed regarding their knowledge of these treatments. Notably, only 38.9% reported that they had been taught that exercise can be used to treat anxiety. On the contrary, 75.6% stated that they knew therapy could be used to treat anxiety. Fifty percent of participants reported knowledge of distraction, 57.5% of as needed medication, and 68.4% of discussion. Only 45.6% of participants reported taking at least one routine anxiety medication, and only 15.25% reported taking two or more routine anxiety medications. Nevertheless, those

taking two or more routine anxiety medications were found to use exercise, distraction, or discussion to treat anxiety much less than those taking only one or zero routine anxiety medications. Finally, anxiety level was compared with the perceived effectiveness of the five treatments surveyed. Despite anxiety level, as needed medications was noted to be the most effective treatment. In those with minimal to mild anxiety levels, therapy and exercise were found to be the most effective treatments next to as needed medications. But, in participants with moderate to severe anxiety, distraction and discussion were demonstrated to be the most effective treatments following as needed medication.

Chapter 5 will begin with a summary of the research study in its entirety. It will follow with a discussion of the findings and implications for clinical practice. Chapter 5 will conclude the research study with limitations and recommendations for further research.

Chapter 5: Discussion

This chapter will begin with the summary of the study. It will progress to a discussion of the findings and implications for practice based on these findings. Next, this chapter will deliberate the limitations associated with this study. It will conclude with recommendations for further research and a final conclusion.

Summary of the Study

This research study focused on the topic of anxiety management in older adults. The purpose of the study was to determine the amount of knowledge possessed by older adults about different anxiety management techniques. It also sought to determine the perceived effectiveness of these specific treatments. The treatments examined were both pharmacological and nonpharmacological approaches. The significance of the study was to determine whether older adults are being educated properly on how to effectively employ non-pharmacological techniques to manage anxiety. Multiple hypothesizes were stated prior to initiating data collection. It was hypothesized that older independent, adults possess little knowledge concerning non-pharmacological anxiety management options. It was also hypothesized that older adults with a moderate to severe anxiety level, determined using the GAD-7, rely more on medication to treat anxiety as opposed to non-pharmacological treatments. Lastly, it was

postulated that older adults who were found to have minimal to mild anxiety levels, based on the GAD-7, rely more on non-pharmacological anxiety management techniques and use less routine and as needed anxiety medications. Imogene King's conceptual system, including the personal, interpersonal, and social systems, provided the foundation for this research study (Husband, 1988). In assessing the knowledge and effectiveness of specific anxiety treatments, health care providers can ensure that anxiety is managed adequately and safely encompassing all three systems emphasized by King.

A literature review was conducted. Previous literature illustrated that nonpharmacological anxiety management strategies have been proven successful in specific situations such as in patients with advanced cancer, those in a critical care unit, and in older adults with cognitive impairment.

A 28 multiple choice question data collection tool was formulated by the researcher. The survey was posted on Survey Monkey with specific inclusion criteria. Inclusion criteria stated that the participant must be at least 55 years of age and had experienced recognizable feelings of anxiety at least once a month for the last year. The first 3 questions of the survey focused on consent and that the stated inclusion criteria was met. The next 7 questions were the taken from the GAD-7, which scored the participant's anxiety as minimal, mild, moderate or severe (Williams, 2014). The following 16 questions focused on utilization, effectiveness, and knowledge of anxiety management techniques. The last two questions inquired about gender and age. Data was analyzed using SAS Version 9.4 software to reveal central tendencies, relative frequencies, and trends.

Fifty-nine surveys were completed and used for data analysis. The sample was composed of 59% females, 37% male, and 4% who preferred not to identify with a specific gender. The mean age range of participants was 60-64. Prior to data collection, it was assumed that older

adults possess little to no knowledge concerning nonpharmacological anxiety management options. However, the data did not support fully this hypothesis. Older adults recognized exercise as a method to treat anxiety the least, with only 38.9% of the sample reporting that they knew that exercise could be used to help manage anxiety. Nevertheless, 50% or more of participants reported prior knowledge of distraction through television, music, or radio, discussions with family or friends, and therapy as mechanisms to treat anxiety. The results indicated that older adults with severe anxiety find therapy and use of as needed anxiety medications the most effective treatments. The data supported the hypothesis that older adults that have minimal to mild anxiety levels rely more on non-pharmacological anxiety management techniques than as needed medications, showing that only a small percentage of participants with minimal to mild anxiety who use as needed medications. It was found that 54.24% of participants do not use any routine medications to treat anxiety. Additionally, agreeing with the stated hypothesis in Chapter 1, a reverse correlation was found concerning the number of anxiety medications taken routinely and the number of nonpharmacological anxiety management techniques employed.

Discussion of Findings

When solely comparing usage of the five different anxiety treatments surveyed, without taking into account any additional factors, it was found that therapy and as needed medication are used the least, respectively 30.5% and 32.2%. Discussion with family or friends and exercise are used by a majority of participants, 67.8% and 69.5% respectively. Remarkably, 93.2% state that they use distraction methods to treat anxiety. Ironically, despite the vast usage of distraction techniques as treatment, only 30.9% found this treatment to be moderately or very effective. Although as needed medications are only used by 32.2% of participants, this treatment method was found to be the most effective, with 47.4% of the sample reporting it to be moderately or very effective. Exercise was found to the next most effective treatment with 41.5% recognizing

this treatment as moderately or very effective. Despite its high effectiveness rate, knowledge concerning exercise was drastically lower than all of the other treatment methods surveyed with only 38.9% possessing knowledge of exercise to treat anxiety.

It is imperative to examine the inverse relationship, determined using the chi square test, involving the number of routine medications taken and nonpharmacological treatments used. Result indicated that 85.4% of participants who use exercise as a method to treat anxiety take zero or one routine medication. Inversely, only 14.6% of participants who engage in exercise for treatment take 2 to 4 daily medications daily despite its noted effectiveness above. Following suit, 83.6% of participants who use distraction techniques to treat anxiety use less than two routine medications. Only, 16.4% of those employing distraction take two or more routine medications. Discussion with family and friends follows the same trend. Eighty percent of participants who report using discussion with family and friends as a treatment method take less than two routine medications. Alternatively, only 20% of participants who use distraction take two or more daily. On the other hand, any participant taking no routine medications reported that they did not use therapy. Use of therapy for anxiety treatment was found to be the highest in participants who take one or two daily medications, at 66.7%. Thirty-three percent of participants who attend therapy take three daily medications but no one using four medications uses therapy as a treatment method.

Perceived effectiveness of all nonpharmacological treatments surveyed is much lower in those with moderate to severe anxiety levels as opposed to participants with minimal to mild anxiety. Sixty-three percent of participants with minimal to mild anxiety found exercise to be effective, 34.4% found distraction effective, 66.7% found therapy effective, and 29% found discussion to be effective. In contrast, only 9.1% of participants with moderate to severe anxiety levels found exercise effective, 28.6% found distraction effective, 18.2% found therapy effective,

and 20% found discussion with family or friends effective in treating anxiety. Although in those with moderate to severe anxiety levels distraction is found to be the more effective nonpharmacological treatment, as needed anxiety medications was rated the most effective treatment at 44.4%.

The results of this study support much of the research reviewed prior to data collection. Bazin et al. (2012) found that those using benzodiazepines participated in less mental activities including reading, doing puzzles, or playing games and no physical activity. The current study showed that those taking two or more routine anxiety medications employed exercise, distraction methods, or discussion with family and friends to treat anxiety far less than those taking zero to one routine anxiety medication. Based on this, one can conclude that the more anxiety medications taken the less likely one is to treat anxiety nonpharmacologically or engage in mentally or physically stimulating activities.

Shahar et al. (2016) noted the effectiveness of dance therapy, which can be classified as exercise, in decreasing anxiety levels in older adults with cognitive impairment. The current study highlighted that exercise is commonly used as an anxiety treatment, with 69.5% of participants stating that they use this treatment. Furthermore, exercise was noted to be the most effective nonpharmacological treatment, with 41.5% affirming that it is moderately or very effective in decreasing anxiety levels.

The current study supports findings noted by Zweers et al. (2016) as well. Zweers et al. (2016) found that when comparing the use of education to decrease anxiety levels in advanced cancer patients with the use of education and therapy, the group receiving therapy as well had a much larger decrease in anxiety levels. Furthermore, they noted that telemonitoring focused on helping patients express themselves, also helped to decrease anxiety levels more than just education alone. This supports the findings of this current study, which included the

effectiveness of discussion with family or friends and therapy. Discussion with family and friends can be adequately compared to telemonitoring as both are employed to help the participant express themselves as a way to decrease anxiety. The current study noted that only 30.5% of participants state that they use therapy to treat anxiety, but 67.8% state that they use discussion with family and friends. Recognizably, 93.8% of participants that use therapy to treat anxiety and 83.8% that use discussion with family or friends report that it is at least mildly effective in decreasing anxiety levels.

Implications for Practice

The findings from this study can be incorporated into practice in a couple different ways. Exercise was found to be the most effective nonpharmacological anxiety treatment. However, only 38.9% of participants reported knowledge of this anxiety treatment. This illustrates an area where further teaching is needed. Providers should stress exercise as a first line anxiety treatment, due to its proven effectiveness, and several other physiological benefits such as hypertension and hyperlipidemia management. However, only 9.1% of those with a moderate to severe anxiety level found exercise effective compared with 63% of participants with a minimal or mild anxiety level. This emphasizes the importance of teaching all patients the benefits of regular exercise, in order to prophylactically treat anxiety before it progresses to the moderate or severe stages. Also exercise, while not felt to be totally effective for those with moderate to severe anxiety, could be a significant adjunct in treatment.

This research distinctly highlights the more routine anxiety medications prescribed, the less nonpharmacological anxiety treatments are utilized. This is important for providers to note and consider when treating patients with anxiety. Participants who reported taking no routine anxiety medications used exercise and distraction through television, reading, or music substantially more than those on even just one medication. They also used discussion with family

and friends slightly more than participants on one routine anxiety medication but this percentage difference was not noted as significant. Once treated with two or more routine medications, the use of exercise, discussion, and distraction plummeted to less than 15%. It is important for providers to not overly medicate patients as this eliminates their motivation to supplement their treatment with proven effective nonpharmacological treatments.

Limitations

It was determined that this research study had several limitations. The researcher had limited time and resources to complete this study. As a result, the small size of the sample and short period of data collection may not accurately reflect the entire population's utilization and knowledge of the surveyed anxiety treatments. Also, due to a lack of time, not every possible anxiety treatment was surveyed. Therefore, the chosen treatments assessed may not correctly reflect the participant's knowledge concerning all pharmacological or nonpharmacological treatments. Next, the Survey was posted to Survey Monkey. The cover page stated the specific inclusion criteria and Questions 2 and 3 of the tool directed the participant to a disqualification page if they answered "No" when asked specifically if this criteria was met. However, because participation was anonymous, it is possible that a participant could falsify that they met inclusion criteria when they in fact did not. Another limitation was the inexperience of the researcher in study investigations. However, this was counteracted with the vast knowledge and research experience of the thesis chairperson. Also, a second reader, likewise experienced in research and the field of nursing, was enlisted to ensure that the study was correctly presented. Another noted limitation was that the data collection tool was a self-reported survey. This relies on the participant to answer all questions honestly. Furthermore, self-report can be biased by emotions, memory, and perception, leading to potentially skewed data. Also, the population surveyed had

to be computer savvy and have ready access to surveys distributed by means of a computer; this limits the applicability of this survey to the entire older adult population.

Recommendations for Further Research

When considering this study along with the research reviewed prior to data collection, there are noted gaps in research. Although effectiveness of nonpharmacological anxiety management techniques were highlighted in the literature reviewed as well as in this study, further research is required to determine whether these techniques, if initiated as soon as the patient is diagnosed with anxiety, can halt the progression of minimal or mild to moderate or severe anxiety. It is important to understand whether non-pharmacological anxiety management techniques help manage anxiety short term or adequately treat anxiety so that it halts progression to a more severe level.

The current study focuses on effectiveness of five different anxiety management techniques in the older adult population. Further research is required to illuminate whether the same treatment mechanisms possess the same effectiveness in the young and middle adult populations.

This study noted that use of exercise, distraction, and discussion with family or friends were used drastically less to treat anxiety when taking two or more routine anxiety medications. Additional research is needed to evaluate whether decreasing the number of routine anxiety medications to only one medication and substituting daily treatment involving exercise, distraction, or discussion, would help decrease anxiety levels.

This study noted that every participant using therapy as a method to treat anxiety was also on a routine medication. Further research is needed to determine the cause of this finding. It would be beneficial to determine whether therapists are stressing the need for medications or if

providers use therapy after anxiety is not adequately controlled with at least one routine medication.

Finally, further research is needed to determine the prevalence of older adults who feel anxious but have not yet received treatment for anxiety. This will provide indicative information as to whether anxiety screening in the older adult population is adequate and where improvements in screening methods are required. This research may also help decrease the number of routine anxiety medications taken by this population as early intervention may increase effectiveness of solely nonpharmacological interventions.

Summary

Chapter 5 begins with a complete summary of the research study. It progresses to a discussion of the findings associated with this study. It is concluded that therapy and as needed anxiety medication are the least commonly used treatments. Distraction techniques are the most commonly used treatment surveyed. Utilization of exercise, distraction techniques, and discussion decreases directly with the number of routine medications taken to treat anxiety. Therefore, as the number of routine medications increases, the less patients employ nonpharmacological anxiety management techniques. This was also stressed by previous research conducted by Bazin et al. (2012) who noted that those using benzodiazepine medications participate less in mental, physical, and daily living activities. Exercise is reported to be the most effective nonpharmacological treatment, which is supported by research conducted by Shahar et al. (2016) who studied the benefits of dance therapy in decreasing anxiety. Implications for practice are discussed next. The perceived effectiveness of exercise in treating anxiety is significant, yet only 38.9% of participants not using exercise report knowledge of this treatment. This presents an area where increased health teaching is required. It is also important for providers to recognize the inverse relationship between the number of routine anxiety

medications prescribed and the utilization of nonpharmacological treatments. Employment of these methods significantly decreases with the prescription of two or more routine anxiety medications. Prescription of only one routine medication may increase usage of effective nonpharmacological methods. The chapter continues by addressing limitations of the study. The experience of the researcher and small sample size are two highlighted limitations. Furthermore, since only five treatment methods were surveyed, this likely does not encompass participant's complete knowledge of nonpharmacological methods. Finally, recommendations for further research are discussed. Further research concerning whether the implication of nonpharmacological techniques, if initiated at diagnosis, can halt the progression of anxiety from its original baseline level to a more severe state. Additional research is also needed to determine whether the treatment methods surveyed in this study possess the same effectiveness in the young and middle adult populations. It is also highlighted that further research is required to determine the prevalence of older adults who experience anxious feelings but have not been treated for anxiety. Addressing this population may have a drastic impact on treating anxiety with nonpharmacological methods. The chapter closes with a final conclusion of the research study.

Final Conclusion

This study provides insight into the most effective ways to treat anxiety in the older adult population. It illustrated the effectiveness and knowledge deficit concerning certain nonpharmacological treatments, highlighting where providers should focus their teaching and instruction. This study can be applied to practice through emphasis on exercise, discussion, and distraction as first line nonpharmacological treatments for minimal to mild anxiety levels. Although, this study implies that the majority of patients with moderate to severe anxiety do not feel that nonpharmacological treatments are effective, they can still be encouraged to attempt

these methods, as this sample may not be representative of the entire population. Although the data elicited from this research study cannot be applied to conclusively treat anxiety in all older adults, it does offer valuable insight on potential treatment options and has served as a significant study concerning the topic of anxiety treatment in older adults.

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Appendix A

Protocol Approval (HSRRC Review): E.NUR.0119.088.V3 - Expedited

Protocol Title: *A Knowledge Assessment of Anxiety Treatments in Older Adults*

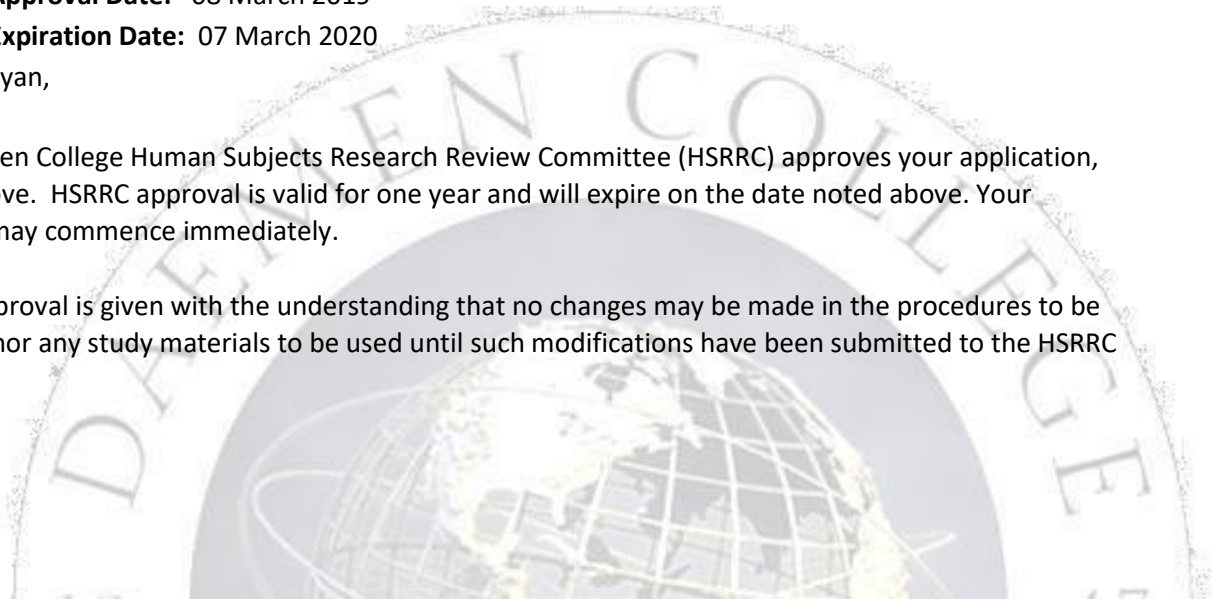
Protocol Approval Date: 08 March 2019

Protocol Expiration Date: 07 March 2020

Dear Dr. Ryan,

The Daemen College Human Subjects Research Review Committee (HSRRC) approves your application, noted above. HSRRC approval is valid for one year and will expire on the date noted above. Your protocol may commence immediately.

HSRRC approval is given with the understanding that no changes may be made in the procedures to be followed nor any study materials to be used until such modifications have been submitted to the HSRRC



for review and have been given approval. The documents used for this protocol must be replicas of those in the approved document.

Studies cannot be conducted beyond the noted expiration date without re-approval by the HSRRC. If an extension is required beyond the expiration date, please submit a request to the HSRRC.

At the conclusion of the study, a Study Closure Form should be sent to the chair person of the HSRRC at hsrrc.chair@daemen.edu.

For the record, the approved protocol and consent forms are attached to this message. Should a need arise, please refer to the protocol ID above in any future correspondence to the Committee regarding this study.

On behalf of the HSRRC Committee, best of luck as you move forward with your research!

Regards,

Jennifer L. Scheid, Ph.D, CSCS
Chair, Human Subjects Committee
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Amherst, NY 14226 jscheid@daemen.edu
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Melissa Peterson, MLS
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**Protection of Human Subjects
Assurance Identification/IRB Certification/Declaration of Exemption (Common
Rule)**

Policy: Research activities involving human subjects may not be conducted. Institutions must have an assurance of compliance that applies to the or supported by the Departments and Agencies adopting the Common research to be conducted and should submit certification of IRB review Rule (56FR28003, June 18, 1991) unless the activities are exempt from or and approval with each application or proposal unless otherwise advised approved in accordance with the Common Rule. See section 101(b) of the by the Department or Agency. Common Rule for exemptions. Institutions submitting applications or

9. The official signing below certifies that the information provided above is correct and that, as required, future reviews will be performed until study closure and certification will be provided.

11. Phone No. 716-839-8477 Administrator: Melissa Peterson 12. Fax No. *n/a*

13. Email: mpeters2@daemen.edu

10. Name and Address of Institution

DAEMEN COLLEGE
4380 Main Street
Amherst, NY 14226

14. Name of Official	15. Title
----------------------	-----------

proposals for support must submit certification of appropriate Institutional Review Board (IRB) review and approval to the Department or Agency in 30, 2021 accordance with the Common Rule.

OMB No. 0990-0263
Approved for use through April

6. Assurance Status of this Project (*Respond to one of the following*)

[X] This Assurance, on file with Department of Health and Human Services, covers this activity:

Assurance Identification No. B00004247, the expiration date March 7, 2020 IRB Registration No. IORG0003568

[] This Assurance, on file with _____, covers this activity.

Assurance No. _____, the expiration date _____ IRB Registration/Identification No. _____ (*if applicable*) [] No assurance has been filed for this institution. This institution declares that it will provide an Assurance and Certification of IRB review and _____ approval upon request.

[] Exemption Status: Human subjects are involved, but this activity qualifies for exemption under Section 101(b),

1. Request Type [X] ORIGINAL [] CONTINUATION [] EXEMPTION	2. Type of Mechanism [] GRANT [] CONTRACT [] FELLOWSHIP [] COOPERATIVE AGREEMENT [X] OTHER Institutional Research	3. Name of Federal Department or Agency and, if known, Application or Proposal Identification No. N/A
--	--	--

4. Title of Application or Activity
A Knowledge Assessment of Anxiety Treatments in Older Adults

5. Name of Principal Investigator, Program Director, Fellow, or Other Dr. Diane Ryan

paragraph/category _____.

7. Certification of IRB Review (Respond to one of the following IF you have an Assurance on file)

[X] This activity has been reviewed and approved by the IRB in accordance with the Common Rule and any other governing regulations. by: [] Full IRB Review on (date of IRB meeting) _____ or [X] Expedited Review on (date) March 8, 2019

[] If less than one year approval, provide expiration date _____

[] This activity contains multiple projects, some of which have not been reviewed. The IRB has granted approval on condition that all projects covered by the Common Rule will be reviewed and approved before they are initiated and that appropriate further certification will be submitted.

8. Comments

Jennifer L. Scheid, PhD, CSCS

Chair, Daemen College Human Subjects Research Review Committee

16. Signature



17. Date

March 8, 2019

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Appendix B

Dear Potential Participant,

I am a graduate student in the Master of Science in Adult-Gerontology Nurse Practitioner Program at Daemen College. I am doing a research study titled “A knowledge assessment of anxiety treatments in older adults.” This research will seek to answer What knowledge do older adults possess concerning benzodiazepines and other anti-anxiety management options? and What is the potential impact of non-pharmacological treatment? This study will determine the amount of knowledge possessed by adults 55 and older about specific anxiety management techniques. In addition, this study will assess the effectiveness of specific pharmacological and non-pharmacological treatments. The purpose of this study is to determine whether patients in this age group are being educated properly on how to effectively manage anxiety with nonpharmacologic interventions.

You are eligible to participate in this survey if you are 55 years of age or older and have experienced recognizable feelings of anxiety at least once a month for the last year. A diagnosis of generalized anxiety disorder is not necessary for participation. Participation is voluntary and voluntary participation is at no cost to the participant.

Participating in this study could be beneficial. Participation may lead to a decreased reliance on anxiety medications to relieve anxiety as well as an increased proficiency in nonpharmacologic treatment options. The risks associated with the study are minimal since the study does not involve testing or treating the participant. However, anxiety is a sensitive subject and may elicit negative feelings while answering questions concerning your anxiety. At the end of the survey, there is contact information for the National Alliance on Mental Illness (NAMI) Helpline to discuss negative feelings that may have developed as a result of this survey. There is also information for the “Anxiety Free” app for smartphones that helps induce relaxation and peaceful thoughts. With this being said, it is likely that you will have a much greater benefit from participation than risk. In order to provide complete protection of human subjects, the Daemen College Human Subjects Research Review Committee approved this study.

As a participant in this study, you would be asked to complete a 28 question multiplechoice survey. Question 1 assesses your consent to participate in this survey. If you do consent and chose to proceed Questions 2 and 3 assess whether you meet the inclusion criteria for the survey. The next seven questions will assess the severity of your anxiety. Questions 11 through 26 inquire about different anxiety management techniques you have tried and the effectiveness of these treatments. It also assesses if you have not used a specific treatment, whether you have heard of this specific modality as a treatment option. Questions 27 and 28 assess your gender and age range. For every question, there is a “prefer not to answer” option. The survey will take approximately 10-15 minutes.

Continue to page 2 for more information.

If you decide that you would like to participate in this study, I ensure that your identity will be kept confidential. The survey is presented through the website, Survey Monkey. The link to the survey is <https://www.surveymonkey.com/r/MFMYX82>. There is no face-to-face interaction. The study is presented through an anonymous survey and will not ask for any identifying information during the survey. A link to Survey Monkey's privacy policy has been included for your review, <https://www.surveymonkey.com/mp/legal/privacy-policy/>. Data collected in the survey may be transferred to various countries, including the United States and other locations that Survey Monkey has offices for data analyzation but will remain anonymous as no identifying information is requested in this survey. You can withdraw from the study at any time before the survey has been submitted by clicking on the "EXIT" link in the top right corner of the survey. At the end of the survey, there is another option to click on the "EXIT" link prior to submitting your answers. However, once the survey has been submitted, by clicking on the "DONE" button, there is no way to withdraw your participation. This is due to the fact the data is anonymous and it was impossible to identify one person's specific survey once submitted. You will give your consent to participate in this survey by answering "YES" to the question at the bottom of this screen that states, "Do you agree to the above terms? By clicking Yes, you consent that you are willing to answer the questions in this survey."

Either I, or my research chair, can be contacted any time for questions about this study and for further discussion concerning potential participation. You can contact me at brittany.bakal@daemen.edu or my thesis committee chair Dr. Diane Ryan, PhD AGPCNP-BC, PHS-BC, CNE at dryan@daemen.edu. The Human Subjects Research Review committee chairperson can be contacted at hsrrc.chair@daemen.edu or (716) 839-8508. Thank you for your time and consideration.

Sincerely,

Brittany Bakal Holman, RN, BS

MS student Daemen College

Appendix C

1. Do you agree to the above terms? By clicking Yes, you consent that you are willing to answer the questions in this survey
a) Yes
b) No

2. Are you 55 years of age or older?
a) Yes
b) No

3. Have you experienced recognizable feelings of anxiety at least once a month for the past year?
a) Yes
b) No

4. Over the last 2 weeks how often have you been bothered by feeling nervous, anxious or on edge?
a) Not at all
b) Several days
c) More than half the days
d) Nearly every day
e) Prefer not to answer

5. Over the last 2 weeks how often have you been bothered by not being able to stop or control worrying?
a) Not at all
b) Several days
c) More than half the days
d) Nearly every day
e) Prefer not to answer

6. Over the last 2 weeks how often have you been bothered by worrying too much about different things?
a) Not at all
b) Several days
c) More than half the days
d) Nearly every day
e) Prefer not to answer

7. Over the last 2 weeks how often have you had trouble relaxing?
a) Not at all
b) Several days

- c) More than half the days
- d) Nearly every day
- e) Prefer not to answer

8. Over the last 2 weeks how often have you been bothered by being so restless that it is hard to sit still?

- a) Not at all
- b) Several days
- c) More than half the days
- d) Nearly every day
- e) Prefer not to answer

9. Over the last 2 weeks how often have you been bothered by becoming easily annoyed or irritable?

- a) Not at all
- b) Several days
- c) More than half the days
- d) Nearly every day
- e) Prefer not to answer

10. Over the last 2 weeks how often have you been bothered by feeling afraid as if something awful might happen?

- a) Not at all
- b) Several days
- c) More than half the days
- d) Nearly every day
- e) Prefer not to answer

11. How often do you take only as needed (not a set number a day) benzodiazepine anxiety medication?

- a) never
- b) 1-2 times a month
- c) 1-2 times a week
- d) 3-4 times a week
- e) once a day
- f) more than once a day
- g) Prefer not to answer

12. How effective do you feel this treatment is?

- a) not applicable because not used
- b) not effective at all
- c) mildly effective (relieves a little anxiety)
- d) moderately effective (relieves most anxiety)
- e) very effective (completely relieves anxiety)

f) Prefer not to answer

13. If you have never personally used this treatment have you heard of using benzodiazepine medications to treat anxiety? a) Yes

b) No

c) Not applicable- I have used this treatment

d) Prefer not to answer

14. How often do you exercise to deal with feeling anxious?

a) never

b) 1-2 times a month

c) 1-2 times a week

d) 3-4 times a week

e) once a day

f) more than once a day

g) Prefer not to answer

15. How effective do you feel this treatment is?

a) not applicable because not used

b) not effective at all

c) mildly effective (relieves a little anxiety)

d) moderately effective (relieves most anxiety)

e) very effective (completely relieves anxiety)

f) Prefer not to answer

16. If you have never personally used this treatment have you heard of using exercise to treat anxiety? a) Yes

b) No

c) Not applicable- I have used this treatment

d) Prefer not to answer

17. How often do you watch tv or listen to music as a distraction from anxious feelings? a) never

b) 1-2 times a month

c) 1-2 times a week

d) 3-4 times a week

e) once a day

f) more than once a day

g) Prefer not to answer

18. How effective do you feel this treatment is?

a) not applicable because not used

- b) not effective at all
- c) mildly effective (relieves a little anxiety)
- d) moderately effective (relieves most anxiety)
- e) very effective (completely relieves anxiety)
- f) Prefer not to answer

19. If you have never personally used this treatment have you heard of using distraction techniques such as tv, radio, and reading to treat anxiety?

- a) Yes
- b) No
- c) Not applicable- I have used this treatment
- d) Prefer not to answer

20. How often do you attend therapy (group or individual) to help work through anxious feelings? a) never

- b) 1-2 times a month
- c) 1-2 times a week
- d) 3-4 times a week
- e) once a day
- f) more than once a day
- g) Prefer not to answer

21. How effective do you feel this treatment is?

- a) not applicable because not used
- b) not effective at all
- c) mildly effective (relieves a little anxiety)
- d) moderately effective (relieves most anxiety)
- e) very effective (completely relieves anxiety)
- f) Prefer not to answer

22. If you have never personally used this treatment have you heard of using group or individual therapy to treat anxiety? a) Yes

- b) No
- c) Not applicable- I have used this treatment
- d) Prefer not to answer

23. How often do you discuss your anxiety with family or friends? a) never

- b) 1-2 times a month
- c) 1-2 times a week
- d) 3-4 times a week
- e) once a day

- f) more than once a day
- g) Prefer not to answer

24. How effective do you feel this treatment is?

- a) not applicable because not used
- b) not effective at all
- c) mildly effective (relieves a little anxiety)
- d) moderately effective (relieves most anxiety)
- e) very effective (completely relieves anxiety)
- f) Prefer not to answer

25. Although you have never personally used this treatment have you heard of discussing your anxiety with family and friends as a way to treat anxiety? a) Yes

- b) No
- c) Not applicable- I have used this treatment
- d) Prefer not to answer

26. How many different anti- anxiety medications are you on? a)

- none
- b) 1
- c) 2
- d) 3
- e) 4
- f) 5 or more
- g) Prefer not to answer

27. What is your age in years?

- a) 55-59
- b) 60-64
- c) 65-69
- d) 70-74
- e) 75-79
- f) 80 or older
- g) Prefer not to answer

28. Do you identify as

- a) male
- b) female
- c) Prefer not to answer

