2020

Non-Pharmacological Interventions for Residents with Dementia

Jared Bielanski
Walden University

Walden University

College of Health Sciences

This is to certify that the doctoral study by

Jared Bielanski

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Janice Long, Committee Chairperson, Nursing Faculty
Dr. Mary Verklan, Committee Member, Nursing Faculty
Dr. Mary Catherine Garner, University Reviewer, Nursing Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2020

Abstract

Non-Pharmacological Interventions for Residents with Dementia

by

Jared Bielanski

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

May 2020

Abstract

The use of antipsychotic medications in persons with dementia has been shown to increase mortality in long-term care (LTC) patients. National guidelines recommend the use of nonpharmacological interventions when possible for LTC residents with dementia. Nurses who work in a local LTC facility are not regularly trained in effective nonpharmacological interventions and lack the knowledge to provide care for patients with dementia. To provide safe and effective alternative interventions to antipsychotic medication use, nurses and direct care staff must have current, evidence-based education available to them about alternative practices. The purpose of this staff education project, guided by Calista Roy's adaptation model and Kirkpatrick's evaluation model, was to develop an education program using a pretest posttest design for LTC nurses on the use of nonpharmacological interventions for LTC residents with dementia. The project focused question asked whether an education program on nonpharmacological interventions would increase the knowledge level of nurses who work in long term care settings. A PowerPoint education program on nonpharmacological interventions and the dangers of antipsychotic medications was presented to 12 nurses in an LTC facility in the Northern United States. Pretests and posttests were administered to determine the efficacy of the education. Data were analyzed descriptively. Results showed an improvement in posttest scores compared to pretest scores with mean score of 74% pretest and 95% posttest. By increasing nurses' knowledge with nonpharmacological interventions in the LTC setting, positive social change may result as patient care is improved and antipsychotic medication use is reduced.

Non-Pharmacological Interventions for Residents with Dementia

by

Jared Bielanski

Project Submitted in Partial Fulfillment

of the Requirements for the

Degree of

Doctor of Nursing Practice

Walden University

May 2020

Table of Contents

Section 1: Nature of the Project

Introduction

Antipsychotic medication use can lead to increased mortality in geriatric patients with a dementia diagnosis (Chen et al., 2013). To reduce the risk of mortality, the Centers for Medicare and Medicaid Services (CMS) implemented policies to reduce antipsychotic medication use in long-term care (LTC) facilities (Centers for Medicare and Medicaid Services, 2017; Justice in Aging, n.d.). To address the problem of antipsychotic medication use in the elderly LTC resident populations and to ensure caregivers have the tools to provide safe and appropriate care, alternative methods to medications must be developed (Steinberg & Lyketsos, 2012; Watson-Wolfe, Galik, Klinedinst, & Bradnt, 2014). A PowerPoint education presentation teaching nonpharmacological interventions was conducted to address the problem of antipsychotic medication use in elderly LTC resident populations. Teaching nursing staff alternative methods to medications may help promote positive social change by providing safe patient care without reliance on antipsychotic medication. Antipsychotic medications have been an industry standard in the past yet have been shown to cause harm (Chen et al., 2013; Livingston et al., 2014; Zuidema et al., 2015).

In Section 1, I review safety and efficacy with antipsychotic medication use in dementia, discuss interventions used to decreased reliance on these medications, and determine the significance as to why antipsychotic use is dangerous in dementia.

Problem

Behavioral and psychological symptoms of dementia (BPSD), are defined as symptoms such as delusions, hallucinations, as well as aggressive and agitated behaviors (Bangash et al., 2017; Livingston et al., 2014). Antipsychotic medications are used to help calm or control resident behaviors. Their use in schizophrenia and other psychotic disorders is well-documented (Bangash et al., 2017). However, their use in patients with dementia has been the target of increased scrutiny from the CMS because antipsychotic medications can lead to increased mortality in those who are diagnosed with a dementia disorder (Centers for Medicare and Medicaid Services, 2017; Chen et al., 2013; Justice in Aging, n.d.). Knowing this, many changes have been made to reduce antipsychotic medication use in geriatric populations with dementia. With the update of regulation F 757, implemented on November 28, 2017, psychotropic medications cannot be prescribed for longer than 14 days without a provider's documented rationale for the need of the medication (Centers for Medicare and Medicaid Services, 2017; Justice in Aging, n.d). If the medication prescribed is an antipsychotic, the provider must provide an evaluation for the patient every 14 days and document that the medication extension is appropriate (Centers for Medicare and Medicaid Services, 2017; Justice in Aging, n.d).

Knowing the importance of antipsychotic reduction in dementia residents, states have developed their own regulations and policies that are regulated at yearly audits in LTC facilities (Centers for Medicare and Medicaid Services, 2017; Justice in Aging, n.d). State surveys must have a minimum sample of residents that have a dementia

diagnosis (Marshall, 2015). Additionally, the surveyors must be updated on which of those residents have taken or are taking antipsychotic medications in the past month. Facilities must have policies regarding behavior monitoring and antipsychotic medication use in residents with a dementia diagnosis and ensure there is a rationale for the medications prescribed (Marshall, 2015).

The updated regulations limit the ability of staff to provide "as needed" commonly known as "prn" antipsychotic medication (Centers for Medicare and Medicaid Services, 2017; Justice in Aging, n.d.). Because of this, staff will have to rely on other methods to assist a LTC patient when an adverse behavior is noted. Unfortunately, nursing and support staff are not always trained or educated on alternative methods to control behaviors in patients with dementia (Chen et al., 2013). Although this rule affects all patients in LTC, it will affect residents of facilities caring for patients with dementia even more since there is an increased incidence of "as needed" or "prn" antipsychotic medications used in this population (Chen et al., 2013). Often, nursing staff rely too heavily on antipsychotic medications for behavioral control, and there are educational deficits among nursing and LTC staff regarding nonpharmacological interventions (Zuidema et al., 2015). If antipsychotic medications are unsafe, and their use is becoming more regulated, it would be important to provide staff within LTC facilities the education to decrease medication reliance. This is significant to developing best evidence-based nursing practice, as safe and quality care must be a priority.

Purpose

For years, reliance on antipsychotic medications to manage behaviors has been the norm (Livingston et al., 2014). Research has shown that antipsychotic medication use is not always safe or effective, and thus, staff must determine other methods to manage behaviors. It can be difficult to change one's habits, as it is often hard to adapt to new processes. The purpose of the project was to decrease staff reliance on antipsychotic medication use and to ensure that medications are not utilized if they are not needed. Staff should be aware that these medications should not be first-line treatment for psychotic symptoms (Chen et al., 2013; Zuidema et al., 2015).

The practice question for this project addressed the following: "Will a nonpharmacological educational program help increase nursing staff knowledge regarding dangers of antipsychotic medication use and effectiveness of nonpharmacological interventions for patients with a dementia diagnosis in long-term care in a Midwest urban metropolitan nursing home?" Pre-and post-tests were completed to test the nurses' knowledge base before and after the presentation to evaluate if the educational program was effective in improving nurses' knowledge of the topic. To measure self-efficacy and impact on practice change, qualitative questioning regarding how nurses felt about their ability to intervene for behaviors in dementia and their confidence regarding use of nonpharmacological interventions were included in the pre- and post-tests. The qualitative questioning helped to assess nurses' feelings regarding the quality and intent of the PowerPoint presentation.

An educational program can be effective in showing nursing staff that nonpharmacological interventions can reduce a resident's adverse behaviors (Chen et al., 2013; Zuidema et al., 2015). Because there was a lack of awareness of dementia care alternatives for many nurses, a knowledge gap existed that needed to be addressed at the local site. This education program filled that gap and showed staff other methods, teaching them that nonpharmacological interventions can be effective, without side-effects that antipsychotic medications can cause (Chen et al., 2013; Zuidema et al., 2015). Educational programs for those providing care to patients with dementia within a clinical setting are beneficial since they can help close any knowledge gaps in practice. They have been shown to improve nursing knowledge and skill-sets as well as improve patient outcomes (Gitlin, Marx, Stanley, & Hodgson, 2015; Livingston et al., 2014; Phillips, Birtley, Petroski, Siem, & Rantz, 2018). Often nurses do not have time for extensive training sessions while at work. Succinct education presentations can be effective to increase nurse turnout for the proposed education. PowerPoint educations are great tools since they provide structured learning and can provide succinct education while respecting time constraints (Jones, 2003).

Nature of the Doctoral Project

Program development relied upon sources that were the highest of the nursing research pyramid, including meta-analysis, systematic reviews, critical appraised articles, and random controlled trials because they are the highest level of evidence (Ingham-Broomfield, 2015). However, good data were also acquired from weaker sources on the pyramid of evidence; often, qualitative evidence can be as important as quantitative

(Ingham-Broomfield, 2015). The best data ensured interventions were evidence-based which is important when implementing an intervention (Fawcett & Garity, 2009). When looking for the best practices for nonpharmacological interventions for BPSD to decrease reliance on antipsychotic medications, the findings and future interventions should be evidence-based just as any intervention should be (Fawcett & Garity, 2009).

Sources of evidence included the following Walden University Library databases: CINAHL, OVID, Cochran, and MEDLINE. Google Scholar provided additional databases, peer-reviewed articles, and studies that the Walden University library did not have (Harzing & Alakangas, 2016). Nonpharmacological interventions can be just as effective as antipsychotic medications, but knowledge gaps exist within the nursing profession (Chen et al., 2013; Livingston et al., 2014; Zuidema et al., 2015). To bridge that gap, nurses must be educated regarding alternative practices (Chet et al., 2013).

Significance

CMS has made it an initiative to reduce the use of antipsychotic medications in LTC facilities and to utilize reduction as a quality assurance process improvement (QAPI) project (Centers for Medicare and Medicaid Services, 2017). By utilizing the QAPI, CMS has provided organizations with incentives to improve quality. Facilities already monitor diagnoses and antipsychotic use on the minimum data set (MDS) (Phillips et al., 2018; Wysocki, Thomas, & Mor, 2015). The MDS data records patients diagnoses and asks questions about particular medications being used which includes antipsychotic medications. This is a quality measure (QM), and data are used at a state and federal level, and facilities can compare to other similar facilities. Those who have

dementia without exclusions and are prescribed antipsychotic medications affect benchmarks (Phillips et al., 2018). The only exclusions for antipsychotic use include diagnoses of schizophrenia, bipolar, Huntington's, and Tourette's syndrome (Centers for Medicare and Medicaid Services, 2015 Phillips et al., 2018). By assessing the results of the MDS, facilities can monitor how they are doing and evaluate their progress toward meeting their goals (Hamton, et al., 2014). Additionally, to help facilities achieve these goals, some states utilize Performance-Based Incentive Payment Program (PIPP). Staff and facility leaders develop a PIPP project based on a facility need; the need is often based on results of state survey findings or extensions of QAPI projects. PIPP incentivizes facility achievements when the meet goals (Alring, 2013).

Besides the monetary incentives that come with QAPI, knowing that the site provides quality care throughout the facility should be enough initiative for the organization and its employees to ensure the project is successful (Hamton et al., 2014). By developing methods to educate staff to decrease reliance on antipsychotic medications in residents with dementia, this project can help reduce facility citations, increase quality, reduce mortality, which all positively impacts patient care. This education can be provided to hospitals and other nursing settings that rely heavily on antipsychotic medications for behavioral control in patients with dementia. Teaching nursing staff other methods rather than reliance on medications can help promote positive social change by providing care that patients with dementia deserve; safe patient care without reliance on medication shown to cause harm (Chen et al., 2013; Livingston et al., 2014; Zuidema et al., 2015).

Summary

CMS dictates that antipsychotic medications should be used only as a last line of treatment for residents with dementia (Centers for Medicare and Medicaid Services, 2017; Justice in Aging, n.d). Nonpharmacological interventions can be effective, though knowledge gaps exist for nursing (Chen et al., 2013; Livingston et al., 2014; Zuidema et al., 2015). To bridge that gap, and provide safe and effective interventions, nurses must be educated about alternative practices (Chet et al., 2013). This project provided education for nursing staff. In Section 2, I discuss further methods with a goal of providing that education to best meet the care needs of patients with dementia.

Section 2: Background and Context

Introduction

Knowledge within the nursing profession on how to intervene for LTC residents with BPSD is deficient (Chen et al., 2013). Often, antipsychotic medications, which are intended for those with psychiatric disorders, are utilized to prevent and control adverse behaviors in residents with dementia. These medications have many potential harmful side effects (Bangash et al., 2017). Research does not support antipsychotic medication use for BPSD even if it is an industry standard, and thus, CMS has developed new guidelines preventing extended use of these medications to encourage alternative interventions for those with BPSD (Centers for Medicare and Medicaid Services, 2017; Justice in Aging, n.d). Research has shown that nonpharmacological interventions are often just as effective as antipsychotic medications, but without the dangerous side effects. Staff education has the potential to be effective to help close any gaps in knowledge and improve the quality of patient care and health outcomes (Chen et al., 2013; Zuidema et al., 2015).

The practice question for the project was: "Will a nonpharmacological educational program help increase nursing staff knowledge regarding dangers of antipsychotic medication use and effectiveness of nonpharmacological interventions for patients with a dementia diagnosis in long-term care in a Midwest urban metropolitan nursing home?" To measure self-efficacy and impact on practice change, qualitative questioning regarding how nurses felt about their ability to intervene for behaviors in dementia and their confidence regarding use of nonpharmacological interventions were

included in the pre-and post-tests. This helped to assess nurses' feelings regarding quality

and intent of the presentation

      To help answer the practice question, Roy's Adaption Model and its application

to BPSD is discussed in Section 2. I also discuss the Kirkpatrick model which will be

used to evaluate efficacy of the education program. I review the history and relevance of

the problem to nursing practice, summarize local factors, and define terms used within

the project. Finally, I discuss the role of the DNP student as it applies to antipsychotics

and BPSD.

Concepts, Models, and Theories

      One theory that applies to BPSD is Sister Callista Roy's Adaption Model (RAM).

Roy believed that humans are bio-psycho-social beings that are constantly interacting

with their changing environment. This environment includes internal and external stimuli,

as well as residual effects of other issues and situations that are not always clear. Roy

believed that humans must be able to adapt to these changes in the environment. Innate

and acquired mechanisms assist us with coping and these coping mechanisms can be

biological, social or psychological in origin. Roy asserted that adaptation is when one can

respond positively to cope with these environmental changes and that maladaptive

responses can lead to illness and disease. According to Roy, health and illness are a

normal part of life and that everyone inevitably experiences both (Allkrisat & Dee, 2014;

Nursing theory, 2016).

      Roy believed that nursing is based on causality and that the nurse can assist with

incorporating positive coping mechanisms as a part of patient care that leads to overall

health and stability. Nurses can achieve this by assessing the patient's illness and behavior, assess the stimuli, diagnose the patient, set goals for patient health, implement interventions to meet goals, and evaluate results to ensure goals were met (Allkrisat & Dee, 2014; Nursing theory, 2016). Those with dementia are not always able to voice needs or able to complete simple task appropriately and may act out in a manner that is not considered appropriate (Livingston et al., 2015; Marshall, 2015). Nurses may think they are helping them adapt by administering a medication to calm them when in reality, they are responding to an unmet need such as uncontrolled pain, boredom, or the need to use the bathroom (Livingston et al., 2015; Marshall, 2015). A patient with BPSD may be over stimulated, requiring a quiet environment or some soft music (Livingston et al., 2015; Marshall, 2015). With proper training, using RAM, a nurse should be able to examine and identify possible needs and provide an appropriate intervention to help the patient with BPSD adapt (Allkrisat & Dee, 2014; Nursing theory, 2016). Unfortunately, due to lack of effective training, nurses are not always aware of these factors and administer an antipsychotic medication instead (Zuidema et al., 2015).

The Kirkpatrick Model evaluates how effective an educational program is by assessing participants at four different levels. Level one is reaction which determines if participants were pleased with the education. Level two, learning, determines if the education program was effective at increasing the nurses' knowledge base. Level three, behavior, will help determine if there will be a change in normal behavior, while level four, results, examines if the program was in-line with the goals of the facility (Bijani, Rostami, Momennasab, & Yektatalab, 2018). Pre-and post-tests were used to evaluate

nursing satisfaction with the educational program as well as perceived knowledge gains and self-confidence regarding nonpharmacological interventions. The questions on the pre-and post-tests determined the effectiveness of the program based on levels one and two of Kirkpatrick's model of evaluation. Questions on these tests helped determine nurses' willingness to change current practice. The education was given to the facility nursing management after the project was completed. Nursing leaders determined that the program was in-line with the organization's goals and it was recommended that they continue to evaluate if the education leads to actual change within their nursing practice. Facility site managers will determine the changes in behaviors and results associated with levels three and four of Kirkpatrick's model of evaluation.

Dementia is defined as cognitive and mental deterioration, and often, there are symptoms of adverse behaviors (Livingston et al., 2014). BPSD are defined as symptoms such as delusions, hallucinations, and aggressive and agitated behaviors (Bangash et al., 2017; Livingston et al., 2014). Antipsychotic medications are medications developed with a goal of calming those with schizophrenia, psychosis, and those who were considered mentally incapacitated; prior to this, very few medications were available to calm others without extreme sedation (King & Voruganti, 2002). Nonpharmacological interventions can be defined as any intervention used that does not require the administration of medications (Wolft et al., 2014).

LTC, skilled nursing facilities (SNF), and nursing homes are used interchangeably for this project and are defined as care centers that provide services including assistance with activities of daily living. LTCs provide services which include but are not limited to

SNFs, medication administration, social services, medical treatments, and meal assistance (Official U.S. Government Site for Medicare, n.d.a; Official U.S. Government Site for Medicare, n.d.b). PowerPoint is a computer program designed to provide presentations via technology. It provides structured learning, can incorporate multiple learning styles, and offers great detail in a short amount of time (Jones, 2003).

Relevance to Nursing Practice

The discovery and use of antipsychotic medications in the 1950s was a breakthrough in psychiatry and provided a new method to treat psychiatric disorders. Throughout the years, these medications evolved, and medicine developed new medications and drug classes with a goal of decreasing psychosis and other psychologic disorders (King & Voruganti, 2002). The appropriateness of prescribing these medications in dementia was often questioned. Multiple clinical control trials and meta-analysis identified that those with a dementia diagnosis have mortality risks of 1.5-1.7 times that of those without the diagnosis who are prescribed antipsychotic medications. Additionally, the likelihood of death or hospitalizations for those who are first prescribed these medications for BPSD within 30 days is over three times than those who are not prescribed the medications (Steinberg & Lyketsos, 2012). As a result, a black box warning was enacted for antipsychotic medications by the FDA, and the American Geriatric Society Beers criteria added antipsychotic medications to the list of medications that should not be used in geriatric dementia patients for treatment of BPSD (Steinberg & Lyketsos, 2012). Eventually, CMS followed suit, deciding that the use of these medications should be limited and mandated antipsychotics reduction in LTC facilities

for those with dementia, and implemented rules for prescribing prn medication use longer than fourteen-days (Centers for Medicare and Medicaid Services, 2017; Justice in Aging, n.d).

There does not seem to be any alternative medications to control BPSD and there is a lack of education for nurses in the use of nonpharmacological interventions which could be just as effective as medication (Chen et al., 2013; Steinberg & Lyketsos, 2012). Thus, many still rely on antipsychotic medication use, even though studies question safety and efficacy (Chen et al, 2013; Steinberg & Lyketsos, 2012). Studies show up to 80-97% of those with dementia will exhibit BPSD at least once in their lifetime (Bangash et al., 2017; Steinberg & Lyketsos, 2012; Watson-Wolfe et al., 2014). Evidenced-based guidelines and CMS regulations recommend providers rule out other causes for BPSD before ordering antipsychotic medications including pain, changes in condition, infection, medication interactions, or other modifiable factors (Bangash et al., 2017; Centers for Medicare and Medicaid Services, 2017; Justice in Aging, n.d; Steinberg & Lyketsos, 2012; Watson-Wolfe et al., Galik, Klinedinst, & Bradnt, 2014).

Literature for Nonpharmacological Interventions

Meta-analysis and literature reviews of random control trials have shown that nonpharmacological interventions are promising but many studies cite that long-term implications require further research (Chen et al., 2012; Livingston et al., 2014). For example, having structured activities and combining multiple nonpharmacological interventions have shown to prevent and decrease agitation in those with dementia in comparison to facilities providing usual care (Chen et al., 2012; Livingston et al.). Music

therapy has also shown to be effective when compared to usual care (Chen et al., 2012; Livingston et al., 2014). Sensory interventions such as therapeutic touch or massage can be utilized as effective interventions when a resident is displaying BPSD (Livingston et al., 2014). Dementia care mapping, meaning assessing each patient with BPSD to determine cause and appropriate intervention, has been shown to decrease severe agitation (Livingston et al., 2014). Helping caregivers to identify unmet needs is very important and shown to decrease BPSD (Livingston et al., 2014). Additionally, facilities trained to provide patient centered-care, utilizing nonpharmacological interventions such as care mapping, and effective communication, with supervision, have been shown to reduce immediate severe agitation (Livingston et al., 2014).

Nonpharmacological interventions such as light therapy or aroma therapy had mixed results when used for patients with BPSD (Livingston et al., 2014). Exercise programs have been shown to prevent BPSD in some studies but has been shown to be less effective in others (Chen et al., 2012; Livingston et al., 2014). If nonpharmacological interventions are not effective, then the administration of an antipsychotic medications may be warranted. However, they should only be used in severe agitation, but nonpharmacological interventions should be used first (Chen et al., 2012; Livingston et al., 2014; Zuidema et al., 2015). Due to lack in training, nurses tend to use psychotropic medication as the first intervention for BPSD (Chen et al., 2012; Livingston et al., 2014; Zuidema et al., 2015). CMS has developed new aforementioned laws and policies for LTC facilities as a means to reduce the use of these medications (Centers for Medicare and Medicaid Services, 2017).

Strategies, Standards of Practice, and Closing Knowledge Gaps

Though there have been strides to reduce antipsychotic medications in LTC facilities, much more must be done. BPSD occurs frequently, and current recommendations are that antipsychotic medication should not be used more than 6-12 weeks, and doses should be as low as possible (Bangash et al., 2012). Unfortunately, they continue to be used frequently, even when considered inappropriate with multiple side effects (Bangash et al., 2012; Chen et al., 2012; Livingston et al., 2014; Zuidema et al., 2015). There are gaps in knowledge for nurses regarding nonpharmacological interventions and thus, these are not utilized (Chen et al., 2012; Livingston et al., 2014; Zuidema et al., 2015). This is even after CMS has implemented rules that dictate they should be used first (Centers for Medicare and Medicaid Services, 2017; Marshall, 2015). In order to ensure that nonpharmacological interventions are utilized and antipsychotic medication use is decreased, more training for LTC employees must be implemented (Chen et al., 2013; Livingston et al., 2014; Zuidema et al., 2015).

Staff rely on antipsychotic medications to manage behaviors even when research has shown that they are not always safe or effective. The fact that these medications are used for BPSD so widespread is evidence that there are knowledge gaps that need to be closed. The purpose of the project is to decrease staff reliance on antipsychotic and increase awareness that these medications should not be first-line treatment for psychotic symptoms (Chen et al., 2013; Zuidema et al., 2015). The educational presentation provided rationale to nurses regarding the dangers of antipsychotic medication use. Additionally, it provided education regarding the efficacy of nonpharmacological

interventions which can be just as effective as antipsychotic medications, without side effects that accompany their use (Chen et al., 2013; Zuidema et al., 2015).

Local Background and Context

In 2012, CMS implemented a program called "Partnership to Improve Dementia Care in Nursing Homes" (Marshall, 2015; Stratis Health, 2017) Behavioral and psychological symptoms of dementia. The program had a goal to decrease unnecessary uses of antipsychotic medications in long stay patients in LTC facilities, and by 2015, rates decreased by 20.1% (23.9% to 19.1%; Stratis Health, 2017). One Midwestern state had better results, decreasing prevalence of unnecessary antipsychotic use in long stay residents to 14.6% from 19%, a 23.1% improvement (Stratis Health, 2017).

The state improved rates by developing new regulations and policies for surveillance and auditing of antipsychotic medication use in LTC residents with dementia (Marshall, 2015). A Midwestern state mandated the implementation of facility policies regarding behavior monitoring and antipsychotic medication use, ensuring rationale for any resident with dementia that is prescribed the medication as a means to reduce medication use (Marshall, 2015). Still, 14.6% of residents in the Midwestern state with a dementia diagnosis are prescribed antipsychotic medications, which supports the need for further education to ensure the use of antipsychotic medications are reduced in LTC facilities. An education program will help nurses working in LTC to provide safe interventions for patients residing in LTC who have a dementia diagnoses since reliance on these medications can cause adverse side effects (Chen et al., 2013).

To improve quality and adhere to CMS recommendations, the educational program will be provided within a Midwestern LTC facility that provides care to patients with dementia. The facility has a dedicated dementia unit within the building. Nursing staff will be the target audience of the presentation. The education program will be reviewed by the nursing management team including the director of nursing, three nurse managers and the nursing director of clinical education prior to being presented to nursing staff. This will ensure that the quality of the information presented adheres to the standards of the care within the facility. Feedback from the nursing management team will be important so that necessary changes can be made before the presentation and ensure the QI process of the facility is respected.

Role of DNP Student

As a nurse practitioner that rounds in LTC, I have noticed that nursing staff often request an order for antipsychotic medication for BPSD. When assessing what methods have been attempted to help calm the resident, I am often surprised to find how often nurses rely on medications for behavior control. I have noticed similar problems during my DNP practicum experience. My role as a nurse practitioner and a DNP student is to disseminate evidence into practice to ensure that nurses are providing high-quality, safe, evidence-based care (American Association of Colleges of Nursing, 2006). As such, I must have the best knowledge on how to approach and intervene when BPSD is present and share this knowledge with nurses, other healthcare providers, and family members of patients with dementia. By providing the appropriate education to help close gaps in practice, I can positively affect patient care in a LTC facility and provide education

where there are knowledge deficits. I can help influence the culture of many local LTC
facilities by teaching and utilize the latest evidence to influence practice.

I must be aware of my own bias. Any change project must be free of bias
otherwise it can affect the validity of the change (Nash et al., 2012). I have worked in
healthcare and with dementia patients in LTC for 20 years, and I believe that I have the
knowledge on which interventions work best. However, I must also be aware that
research and evidence should be driving this project, not my personal beliefs or what I
think works best. A study is strengthened and evidence is developed when research via
clinical trials, meta-analysis, and systematic reviews are used to drive the change rather
than relying on the thoughts and feelings of one person (Nash et al., 2012; Terry, 2015).
Thus, I provided the education to nurses based on the evidence, not on my personal
beliefs.

Summary

Antipsychotic medications can have negative health consequences for patients
with dementia when used to control BPSD (Chen et al., 2013; Zuidema et al., 2015).
Many state and federal initiatives have been implemented to reduce their use (Centers
for Medicare and Medicaid Services, 2017; Stratis Health, 2017). Multiple
nonpharmacological interventions can be effective to prevent adverse behaviors or
intervene when BPSD are noted (Chen et al., 2013; Zuidema et al., 201). Many nurses
are not educated on the best methods of intervention for BPSD and continue to use
antipsychotic medications regardless of the side effects. Appropriate evidence-based
education, based on the evidence and free of bias can be implemented to ensure that

nurses are providing safe, quality care to dementia residents which will positively affect

quality of life. In Section 1, I review antipsychotic medication use and how it affects

local populations. I will clarify sources and relationship of evidence as well as possible

limitations based on ethics. Finally, I will describe the education program and the

analysis and synthesis of educational evaluation data.

Section 3: Collection and Analysis of Evidence

Introduction

The practice question for the project addressed the following: "Will a nonpharmacological educational program help increase nursing staff knowledge regarding dangers of antipsychotic medication use and effectiveness of nonpharmacological interventions for patients with a dementia diagnosis in long-term care in a Midwest urban metropolitan nursing home?" The long-term goal of the project was to decrease staff reliance on antipsychotic medication and rely more on nonpharmacological interventions first; antipsychotic medications are not recommended to be first-line treatment for BPSD (Chen et al., 2013; Zuidema et al., 2015). The problem is that knowledge gaps exist within the nursing practice (Chen et al., 2013; Livingston et al., 2014; Zuidema et al., 2015). The purpose of the quality improvement education project was to address these gaps in knowledge. To measure self-efficacy and impact on practice change, a question regarding nursing confidence regarding use of nonpharmacological interventions was included in the pre-and post-tests.

In Section 3, I discuss antipsychotic medication use and how it affects local populations. I clarify sources and relationship of evidence as well as possible limitations based on ethics. Finally, I describe the education program and the analysis and synthesis of educational evaluation data.

Practice-Focused Question

The practice question for the project addressed the following: "Will a nonpharmacological educational program help increase nursing staff knowledge

regarding dangers of antipsychotic medication use and effectiveness of

nonpharmacological interventions for patients with a dementia diagnosis in long-term

care in a Midwest urban metropolitan nursing home?"

Antipsychotic medications are often used as an intervention for BPSD even

though they are harmful, and there is little evidence they are effective (Bangash et al.,

2017; Chen et al., 2013; Steinberg & Lyketsos, 2012). CMS initiatives have been

implemented to ensure that LTC facilities provide effective interventions for BPSD to

reduce reliance on antipsychotic medications (Centers for Medicare and Medicaid

Services, 2017; Chet et al., 2013; Justice in Aging, n.d). CMS has implemented

programs with goals to decrease unnecessary use of antipsychotic medications in

patients that reside in LTC facilities (Stratis Health, 2017). Unfortunately, gaps in

knowledge exist related to nonpharmacological interventions that are effective at

reducing BPSD (Chen et al., 2013; Zuidema et al., 2015). Staff should be educated

related to effective nonpharmacological interventions to help close any gaps in

knowledge and practice, and improve the quality health outcomes (Chen et al., 2013;

Zuidema et al., 2015).

Operational Definitions

Dementia is defined as cognitive and mental deterioration, and often, there are

symptoms of adverse behaviors (Livingston et al., 2014). BPSD are defined as

symptoms such as delusions, hallucinations, and aggressive and agitated behaviors

(Bangash et al., 2017; Livingston et al., 2014). Antipsychotic medications are

medications developed with a goal of calming those with schizophrenia, psychosis, and

those who were considered mentally incapacitated; prior to this, very few medications were available to calm others without extreme sedation (King, & Voruganti, 2002). Nonpharmacological interventions are defined as any intervention that does not require the administration of medications (Wolft et al., 2014).

LTC, SNF and nursing homes can be used interchangeably for this project and are defined as care centers that provide services including assistance with activities of daily living. LTCs provide services which include but are not limited to SNFs, medication administration, social services, medical treatments, and meal assistance (Official U.S. Government Site for Medicare, n.d.a; Official U.S. Government Site for Medicare, n.d.b). PowerPoint is a computer program designed to provide presentations via technology. It provides structured learning, can incorporate multiple learning styles, and provide great detail in a short amount of time (Jones, 2003).

Sources of Evidence

Sources and Appraisal of Evidence

A search within the Walden University Library databases, including CINAHL, MEDLINE, OVID, Cochran, among others, revealed many sources of evidence - qualitative and quantitative. These included systematic reviews and meta-analysis, random controlled trials, and expert opinions. For this project, search terms that were used included *Alzheimer's, dementia, antipsychotic, psychotropic, nonpharmacological, music therapy, art therapy,* and *aromatherapy*. Evidence selected was of the highest caliber possible, using the nursing research pyramid, which appraises evidence-based on seven levels of evidence (Ingham-Broomfield, 2015).

The highest level is level one, and the lowest level of evidence is level seven. Reviewing the hierarchy of evidence, systematic reviews and meta-analysis are the highest evidence (level one), critically appraised topics and articles are second and third highest levels respectively (levels two and three), followed by random controlled trials (level four). Cohort studies, case-controlled studies and reports, and lastly expert opinion complete the evidence pyramid (levels five through seven, respectively; Ingham-Broomfield, 2015). It is important to utilize evidence from the highest levels of the pyramid as able (Ingham-Broomfield, 2015). This information will help to close the knowledge gaps at the practice setting and determine how education can help nursing staff decrease reliance on antipsychotic medications to control behaviors for residents with a dementia diagnosis.

One challenge included finding research on patients who were 65 years of age and older, and on those who were cognitively impaired. It is considered unethical to withhold treatments for a patient with dementia since the patients are considered vulnerable populations (West et al., 2017). This limited the amount of random control trials or other high-level articles of evidence which can decrease the strength or relevance of any intervention (Ingham-Broomfield, 2015; West et al., 2017).

Dementia and use of antipsychotic medications are well-documented, and there are multiple articles available in the Walden University Library. Eighty to 97% of patients with dementia will exhibit signs of BPSD at least once during their diagnosis (Bangash et al., 2017; Steinberg & Lyketsos, 2012; Watson-Wolfe et al., 2014). This can increase the chances a patient will be prescribed an antipsychotic medication. In fact,

25% of all patients in a LTC facility in the United States are currently taking antipsychotic medications (Watson-Wolfe et al., 2014). Research through many trials, systematic reviews, and meta-analysis, show limited efficacy for antipsychotic medications in those with dementia (Bangash et al., 2017; Chen et al., 2013; Watson-Wolfe et al., 2014). Instead, they have been shown to have increased risks for serious adverse consequences including cardiovascular events, falls, weight changes, or death (Bangash et al., 2017; Chen et al., 2013).

Evidence suggests that nonpharmacological interventions can be effective at reducing BPSD and should be first-line treatment (Bangash et al., 2017; Chen et al., 2013; Watson-Wolfe, et al., 2014). It is important to educate staff in LTC facilities to help decrease reliance on antipsychotic medications, thus improving the quality of life of the patients and reducing the chances of significant adverse effects from antipsychotic medications in this population (Watson-Wolfe et al., 2014).

Published Outcomes and Research

Sources of evidence included the Walden Library databases including: CINAHL, OVID, Cochran, and MEDLINE. Google Scholar provided additional databases, peer-reviewed articles, and studies that the Walden library may not have (Harzing & Alakangas, 2016). Considerable data were available regarding antipsychotic medications, BPSD, and nonpharmacological interventions. Search terms used included *Alzheimer's, dementia, antipsychotic, psychotropic, nonpharmacological, BPSD, PowerPoint, music therapy, art therapy,* and *aromatherapy*. These terms were used

alone and in multiple combinations until the highest caliber of of available evidence possible was found (Ingham-Broomfield, 2015).

Evidence Generated for the Doctoral Project

The goal of the scholarly project was to develop a PowerPoint presentation that can be used to educate nurses employed in LTC that work with geriatric dementia populations. CMS laws mandate that any staff in LTC who are responsible for caring for residents with dementia have dementia training upon hire and annually thereafter (Minnesota Department of Health, 2015; Office of the Reviser of Statutes, 2018). CMS mandates that training also focus on antipsychotic medications and methods to reduce their use in residents with dementia (Unroe, Ouslander, & Saliba, 2018). The PowerPoint presentation met these criteria and will be part of future facility dementia training.

The education program was reviewed by the nursing management team including the director of nursing, three nurse managers and the nursing director of clinical education prior to being presented to nursing staff. This ensured that the quality of the information presented adhered to the standards of the care within the facility. Feedback from the nursing management team was important so that necessary changes could be made before the presentation and ensure the QI process of the facility was respected. A sample of the nursing staff attended. It is important that any education program be sustainable, and the director of education's attendance and feedback were particularly important since the education director chairs the QI committee. The education director will also be responsible for teaching the presentation on-site as part of the facilities new hire dementia education as well as state mandated annual dementia education required

within the state (Minnesota Department of Health, 2015; Unroe, Ouslander, & Saliba, 2018).

Pretests-posttest can be used to assess knowledge gain (Terry, 2015). The answers on the pretest were compared to the answers on posttest to determine how much participants had learned (Terry, 2015). Each participant was assigned a number rather than using names to blind everyone attending the presentation. The project did not utilize residents. Approval was received from the Walden University Institutional Review Board (IRB; 07-15-19-0402185) prior to implementing the educational program (Terry, 2015).

PowerPoint has many strengths and weaknesses. They provide structured learning. They incorporate many different learning styles such as providing written words, grafts, audio, video, among others (Jones, 2003). Incorporating multiple learning styles is important as many people learn differently and a PowerPoint can cover the learning needs of everyone if not, most people (Jones, 2003). The font and designs can be edited and modified to help pull the viewers in. They are easy to disperse since they can be sent with a click of a button electronically and shared among many individuals; handouts can easily be made as well. PowerPoint files are easy to edit when new information/evidence is noted; thus, the presentation can continue to stay current in the future without one having to spend a lot of time to update the information (Jones, 2003).

The strengths of using a PowerPoint in LTC is that there is limited time. With a lot of information to share, it is good that one has both a visual representation via a PowerPoint but also to provide handouts or share the information for staff. Additionally,

there are many with different levels of education that attended the presentation. With the multiple types of learning styles represented, the chances that some of the information will be understood will increase when compared to methods where many learning styles are not respected (Jones, 2003).

PowerPoint is not without its weakness. There are still many that do not do well with technology or feel intimidated by its use (Jones, 2003). Additionally, the initial time to make the presentation can be prolonged, more so than a speech, and may discourage others from making them substantive which can reduce the intended learning goals. If the presentation lacks interactive learning, those being educated may not pay attention or learn in a manner where the information does not become a part of one's skill set (Jones, 2003). Like all forms of education, there are strength and weaknesses. One completing a change program must be aware of strengths, weaknesses, and limitations, ensuring to implement the program utilizing methods geared towards building on strengths to achieve desired results. One also must ensure not to let bias or outside influence affect the integrity of the project (Nash et al., 2012; Terry, 2015).

Analysis and Synthesis

A pretest-posttest design was used to determine efficacy of the educational program. This design is effective at assessing how effective the intervention was by comparing two different sets of data collected before and after the intervention (Alessandri, Suffiano, & Perinelli, 2017). Multiple choice and true or false questions regarding BPSD, nonpharmacological interventions, antipsychotic medication use in dementia were asked. These questions were developed after a literature review.

Additionally, questions regarding confidence with nonpharmacological interventions for BPSD were included on the pretest prior to the education presentation. A Likert scale from one to ten was used to quantify the data for the latter questions (Bijani et al., 2018). Identical questions were also asked on the post-test after the educational program was completed to quantify the data. Additional questions regarding nursing satisfaction with the educational program will be included on the posttest per Kirkpatrick's first level of evaluation (Bijani et al., 2018). Each individual that completed the tests remained confidential but used the same unique identifier to ensure the compared data were the same person.

Data were entered without any identifiers into excel software. Calculations of percentage of correct answers for multiple choice and true or false questions were completed. Likert scores were compiled in regards to nursing confidence for both pretests and posttests. Both the pretest and posttest were compared. The data from the pretest and posttest were placed on a single table to show the differences between the two tests. Results will be reported below via frequency distributions to compare and contrast scores before and after the education program. A Likert score from 0 to ten regarding nursing satisfaction with the educational program was included on the posttest per Kirkpatrick's first level of evaluation. A score of 0 meant a nurse was not satisfied at all while a score of ten showed that one was highly satisfied. Once the data was collected, it was synthesized to determine if improvements were needed, if the education program should be changed in future studies, or if recommendations for the site should be provided based on what was collected and learned (Armstrong, Lauder, & Shepherd, 2015).

Summary

A project of change must be relevant and so should the research. This means that evidence should be of the highest caliber, free from bias while paying attention to ethical consideration and integrity of the project (Ingham-Broomfield, 2015; Nash et al., 2012; Terry, 2015; West et al., 2017). Since antipsychotics can be harmful to patients with dementia, alternative treatments must be considered, and if effective, their use should be disseminated within nursing practice (Bangash et al., 2017; Steinberg & Lyketsos, 2012; Watson-Wolfe et al., 2014). In Section 4, I will discuss the results of the research, including findings, limitations, implications, and recommendations to ensure that those with dementia receive safe, quality care thus, ensuring quality patient outcomes are achieved.

Section 4: Findings and Recommendations

Introduction

Antipsychotic medications are often used to calm residents exhibiting BPSD even though they are harmful, and there is little evidence they are effective (Bangash et al., 2017; Chen et al., 2013; Steinberg & Lyketsos, 2012). Staff should be educated related to effective nonpharmacological interventions to help close any gaps in knowledge and practice, and improve the quality health outcomes (Chen et al., 2013; Zuidema et al., 2015). The practice question for the project addressed the following: "Will a nonpharmacological educational program help increase nursing staff knowledge regarding dangers of antipsychotic medication use and effectiveness of nonpharmacological interventions for patients with a dementia diagnosis in long-term care in a Midwest urban metropolitan nursing home?"

The literature was reviewed utilizing the Walden University Library databases, including CINAHL, MEDLINE, OVID, Cochran, among others. I selected sources with evidence of the highest caliber available per the nursing research pyramid (Ingham-Broomfield, 2015). A PowerPoint presentation regarding the dangers of antipsychotic medication and nonpharmacological interventions was provided to nursing staff at a Midwest LTC facility based on the literature (see Appendix A). PowerPoint was used since a lot of information can be delivered to staff in a short period of time (Jones, 2003). In total, 12 nurses attended the presentation. Promotion of the meeting was provided a week in advance via a flyer to on the nursing communication boards, which was standard practice for all staff training provided to nurses at the facility. The presentation was given

at shift change between the morning and afternoon shifts to improve attendance. The process was kept to 45 minutes to ensure to respect the time of each nurse attending.

Overall, 12 of 14 available nurses in the building attended the presentation. Identical questions on the pretests and posttests were provided attached together in a packet to determine if the PowerPoint was effective at increasing nurses' knowledge and comfortability regarding nonpharmacological interventions (see Appendix B). Each set of tests had unique numbers written on both to ensure each nurses' identity was not known and to also ensure that the same person completing the pretest completed the corresponding posttest. The test packets were shuffled out of order to further ensure each nurses' identity was unknown. The pretest was completed and collected prior to the presentation to ensure that no answers were changed based on learned information and to ensure that the results of the pretests were not mistaken for the posttests and vice-versa. After the posttest was completed, each nurse was asked to ensure that the posttest had the word "Posttest" written on them to prevent the posttest results from being mistaken for the pretest. In the following sections, I discuss findings from the pretests and posttests.

Findings and Implications

Twelve nurses attended the presentation within the facility. Question one on both the pretest and posttest used a Likert Scale from 0 to 10 to determine how comfortable nurses were with implementing nonpharmacological interventions; 0 meant the nurses were not comfortable at all and 10 represented that the nurse was extremely comfortable. The average comfortability score of the pretests was 8.33 out of 10. After the presentation, the rating of comfortability increased to 9.25% (see Appendix C). Many

already felt comfortable with nonpharmacological interventions before the PowerPoint presentation. Each nurse felt at least as comfortable after the presentation as they did before the presentation while many (five of 12) felt more comfortable with the use of nonpharmacological intervention after the presentation.

Question's two through 10 included six multiple choice and three true or false questions to test the nurses' knowledge regarding effective nonpharmacological interventions as well as the history and dangers of antipsychotic medications (see Appendices B and C). Question two asked potential consequences of using nonpharmacological interventions. Half of the nurses (six of 12) got the question correct on the pretest while all got it correct on the posttest after the education. Question three was a true or false question falsely asking if CMS encouraged antipsychotic medication use. Ten of 12 nurses answered the question correctly on the pretest and the same number answered the question correctly on the posttest, thus no change after the education. The fourth question discussed the history of antipsychotic medication, asking which decade antipsychotic medications were originally used and the original diagnosis the medications were meant to treat. Seven nurses answered the question correctly on the pretest, while all responded correctly after the presentation. The fifth question was asked to determine which interventions were considered evidenced-based relating to BPSD. Eight were correct on the pretest, while all answered correctly on the posttest.

The sixth question provided a scenario on a potential behavior a resident with dementia may exhibit and asked the nurses to determine the best intervention to use. All nurses answered correctly on the pretest and the posttest. Question seven was a true or

false question asking if nurses should use nonpharmacological interventions before antipsychotic medications. Eleven of 12 were responded to correctly on both the pretest and the posttest. Question number eight asked if there was a black-box warning using antipsychotic medications with dementia. Each nurse answered the question correctly on the pretests and the posttest. The ninth question asked the nurses to define dementia care mapping. Ten of 12 nurses were correct on the pretest and all were correct on the posttest. The final question, number 10, asked nurses to determine which nonpharmacological intervention provided was an effective evidenced-based intervention for BPSD. Only three of the nurses were correct on the pretest, which improved to nine on the posttest.

The average score on the pretest was 74%, while the average score after the presentation was 95%. Of the 12 nurses that completed the tests, only one nurse had a higher score before the presentation when compared to the posttest score after (8%). The other 11 nurses' scores increased after the presentation (92%). Overall, nurses felt more comfortable regarding the use of nonpharmacological interventions, and nurses' knowledge base improved as evidenced by the overall increase in the average scores (9.25 vs 8.33). In terms of satisfaction with the presentation, nine of 12 nurses rated the presentation 10 out of ten, two rated it nine out of 10, and one rated it eight out of 10, for an average score of 9.67 out of 10.

Limitations

As with any testing, limitations are noted. For instance, the facility had its annual state survey two weeks before the planned presentation, which limited the days that the PowerPoint presentation could be completed since the facility had to provide mandatory

training related to the plan of action for survey correction. This can lead to information overload due to too many education programs, which could affect outcomes. It could also affect overall attendance as some may not have availability to attend multiple lectures, and the PowerPoint presentation was not mandatory like the survey correction education trainings. Given the high attendance of nurses working that day (12 out of 14 nurses or 86%), attendance was still high.

When using multiple choice and true or false questioning, there is a probability that one answers the question correctly even though he or she does not know the actual correct answer. Additionally, since pretests and posttests questions were the same, nurses were aware of what they needed to learn to improve scores on the posttest. With multiple choice tests, this is known as "testing effect" and can affect posttest scores positively (Roediger, 2005). Additionally, there has been a CMS initiative to reduce antipsychotic medications in LTC and thus, training had been provided prior to this presentation. The CMS push to decrease antipsychotic medication use after this project began could significantly impact the nurse's knowledge base, which could account for specific answers having high correct percentages before and after the PowerPoint presentation was provided. A strength of PowerPoint is that a lot of information can be provided and the training can be completed quickly (Jones, 2003). Nurses were able to complete the training in 30 minutes, and the result was an increase in the overall scores on the posttest.

Implications

Since there is a CMS initiative, LTC facilities must ensure that nurses can provide effective interventions for BPSD and reduce reliance on antipsychotic medications

(Centers for Medicare and Medicaid Services, 2017; Chet et al., 2013; Justice in Aging, n.d). By educating nurses regarding effective evidence-based interventions that decrease antipsychotic use, this can help improve facility quality measures, in-turn increases reimbursement and ensure that quality care is provided (Alring, 2013; Hamton, et al., 2014). Teaching nursing staff alternative methods rather than reliance on medications that have been shown to be dangerous in those with a dementia diagnosis positively impacts social change since the care is safe. Nonpharmacological interventions and the reduction of antipsychotic use for patients with BPSD are evidence-based which will not cause harm. By reducing reliance on antipsychotic medications, safe quality care can be provided, which can positively affect patient safety and quality outcomes (Chen et al., 2013; Livingston et al., 2014; Zuidema et al., 2015).

Recommendations

A PowerPoint presentation educating nurses related to the dangers on antipsychotic medications and effective nonpharmacological can be effective at increasing nurses' knowledge base, in turn, positively impact nursing practice. However, it would be just as important to ensure long-term care facilities implement programs utilizing nonpharmacological interventions to decrease reliance on antipsychotic medications for those with dementia. Facilities should ensure to have structured activities, utilize care-mapping, and implement discussion groups regarding root-causes of behaviors and effective interventions in those with a dementia diagnosis that exhibit BPSD (Chen et al., 2013; Livingston et al., 2014; Zuidema et al., 2015). Additionally, a quick PowerPoint presentation on other subjects associated with nursing care may be

effective at providing a large amount of information to nursing staff over a short period of time, leading to an increase in one's skill level and knowledge base. Since nurses' time are limited, a PowerPoint presentation can help respect this time thus, increase attendance (Jones, 2003).

Strength and Limitations

A PowerPoint presentation was used to ensure that the presentation was succinct to ensure the time of each nurse was respected (Jones, 2003). Being that the presentation was not mandatory, yet 12 of 14 nurses attended shows that this was a subject that was important and interested nurses at the facility. The large number of attendees was a strength as it provided a large amount of data to determine the effectiveness of the intervention being provided. The information utilized within the presentation was from the highest caliber available utilizing the nursing research pyramid to strengthen the information provided. The tests were clearly labeled with unique identifiers rather than attendees names. Subjects were blinded to protect each persons' identity, which can decrease pressure to get answers right. Those attending could relax and focus on learning. Each person was aware that the answers provided would not be shared with others which helped to ensure each answer provided was based on each nurse's knowledge of the subject. The scores of all but one person was better after the presentation when compared to the pretest, which shows the information provided was effective overall.

Since a pretest-posttest design was used and the questions on both were duplicated, those attending the presentation could have memorized the questions being asked thus likely skewing the results of the post-test in a positive manner. The patient

population used is geriatric patients with a dementia diagnosis. Geriatric patients with dementia in long-term care are considered vulnerable populations that cannot give consent. Thus, ethically the amount of random control trials and other high-level evidence, based on the nursing research pyramid is limited (West, et al., 2017).

PowerPoint is not without its issues. For one, the presentations can sometimes provide too much information at one time for some to process thus inhibiting the effectiveness of proposed knowledge gains (Jones, 2003). A lack of an interactive component can hinder some participants' learning (Jones, 2003). Since the presentation was not mandatory, it did limit the number of nurses that attended. One goal of the presentation was to teach nurses ways to provide safe, effective care. Making the presentation mandatory thus ensuring that all nurses that work at the facility attended the presentation would have been better. Since this was only one presentation, further research would be recommended to determine if project could be replicated thus, strengthen the results.

Recommendations for future studies include the addition of an interactive component to the presentation to keep participants engaged (Jones, 2003). Making the presentation mandatory could increase the number of participants which could strengthen future studies. Additionally, using other methods to test proposed knowledge gains besides pretests and posttests would be important to determine if the results of this project could be replicated without potential bias.

Section 5: Dissemination Plan

One presentation was provided for the sake of the project. Still, more work will be done to guarantee that the facility meets goals regarding the reduction of antipsychotic medications to ensure the care provided is safe and appropriate. Annual state surveys will be provided at facilities per CMS guidelines and antipsychotic reduction will continue to be a focus (Centers for Medicare and Medicaid Services, 2017). Thus, it is important for the facility to ensure all nursing staff are trained regarding the dangers of antipsychotic medications and appropriate nonpharmacological interventions. The presentation and questions for the pretest and posttest were given to facility nursing management who will utilize the training for annual dementia presentations and new-hire nursing education. Partnering institutions associated with the facility would also benefit from the information provided since dementia is present at most, if not all SNFs. It will also be important to adapt this presentation to nursing assistants and non-nursing staff since all employees interact with patients that have dementia (Livingston et al., 2014). Family education could also be important since the actions of all that come into contact with the patient can impact patients and lead to BPSD (Livingston et al., 2014).

Analysis of Self

For anyone in the nursing field or any medical profession, care should be safe and evidence-based (Fawcett & Garity, 2009). This means that one should not implement interventions simply because they are the methods that have always been used; one should always take safety and efficacy into consideration. Antipsychotic medications have been shown to be harmful to those with dementia, and many nonpharmacological

interventions are safer and more effective (Chen et al., 2013; Zuidema et al., 2015). Prior to this research, I often utilized antipsychotic medications for BPSD since that was what seemed to be an industry standard. However, after extensive research as part of this project, I realized that these medications should rarely be used and only after all other potential interventions and resources have been exhausted. As a nurse practitioner who will soon have a doctoral of nursing degree, knowing that antipsychotic medications can be harmful means that I will have to be aware of possible dangers when determining if the prescription of an antipsychotic is warranted for a patient with dementia.

As part of my commitment to safe, quality care, I must also disseminate evidence into practice to ensure that decision making regarding any intervention is high quality, safe, and evidence-based (see American Association of Colleges of Nursing, 2006). I cannot turn a blind eye when others are providing care that can be harmful or ineffective. It can be difficult to debate the quality of interventions with others, but it is important for any scholarly journey, especially since the well-being of others must be considered. I must ensure that my colleagues in the nursing and medical professions are also aware of harmful interventions and safer, more effective alternatives via frequent collaboration, networking, and by sharing experience and knowledge to ensure quality care is being provided.

Summary

Nursing and medical care will continue to evolve, and the interventions utilized today may not be the same in the years to come. It is important to provide care that is the best available via the latest scientific evidence noted in the literature. Nursing and

healthcare workers must adapt for the benefit of each patient and community. Since antipsychotic medications can harm in those with dementia, and some nonpharmacological interventions are safe and more effective, it is important for nurses to be aware and adapt practice based on what is known today. By providing safe and evidence-based care, nurses can ensure that the quality of care delivered is of the highest quality, and thus patient care will be positively impacted.

References

Alessandri, G., Suffiano, A., & Perinelli. (2017). Evaluating intervention programs with a
pretest-posttest design: A structural equation modeling approach. *Frontiers in
Psychology, 8,* 233. doi:10.3389/fpsyg.2017.00223

Allkrisat, M., & Dee, V. (2014). The validation of the coping and adaptation processing
scale based on the Roy adaptation model. *Journal of Nursing Measurement,
22(3),* 368-380. doi:http://dx.doi.org/10.1891/1061-3749.22.3.368

Alring, G., Cooke, V., Lewis, T., Perkins, A., & Grabowski, D. (2013). Minnesota's
provider-initiated approach yield care quality gains at participating nursing
homes. *Health Affairs, 32*(9), 1631-1638. doi:10.1377/hlthaff.2013.0294

American Association of Colleges of Nursing. (2006). *The essentials of doctoral
education for advanced nursing practice.* Retrieved from
http://www.aacnnursing.org/Portals/42/Publications/DNPEssentials.pdf

Armstrong, L., Lauder, W., & Shepherd, A. (2015). An evaluation of methods used to
teach quality improvement to undergraduate healthcare students to inform
curriculum development within preregistration nurse education: A protocol for
systematic review and narrative synthesis. *Systematic Reviews, 4(8),* 1-7.
doi:https://doi.org/10.1186/2046-4053-4-8

Bangash, A., Stubbs, R., Khan, F., Samnani, S., Aziz, H., & Mitra, M. (2017).
Association between antipsychotics and adverse outcomes in dementia. *Progress
in Neurology and Psychiatry, 21*(4), 20-26. doi:www.progressnp.com

Bijani, M., Rostami, K., Momennasab, M., & Yektatalab, S. (2018). Evaluating the

    effectiveness of continuing education program for prevention of occupational

    exposure to needles stick injuries in nursing staff based on Kirkpatrick's model.

    Journal of the National Medical Association, 110(5), 459-463.

    doi:https://doi.org/10.1016/j.jnma.2017.11.002

Centers for Medicare and Medicaid Services. (2015). *Antipsychotic use in Part D*

    enrollees with Dementia. Retrieved from

    https://www.cms.gov/Medicare/Prescription-Drug-

    Coverage/PrescriptionDrugCovGenIn/Downloads/Antipsychotic-Use-in-Part-D-

    Enrollees-with-Dementia-v12092015.pdf

Centers for Medicare and Medicaid Services. (2017). *National partnership to improve*

    dementia care in nursing homes. Retrieved from

    https://www.cms.gov/Medicare/Provider-Enrollment-and-

    Certification/SurveyCertificationGenInfo/National-Partnership-to-Improve-

    Dementia-Care-in-Nursing-Homes.html

Chen, R., Liu, C., Lin, M., Peng, L., Chen, L., Liu, L., & Chen, L. (2013).

    Nonpharmacological treatment reducing not only behavioral symptoms, but also

    psychotic symptoms of older adults with dementia: A prospective cohort study in

    Taiwan. *Geriatrics and Gerontology International, 14*(2), 1-7.

    doi:10.1111/ggi.12126

Fawcett, J., & Garity, J. (2009). *Research and evidence-based nursing practice. In*

    Evaluating Research for Evidence-Based Nursing. Philadelphia, PA: F. A. Davis.

Friis, R. H., & Sellers, T. A. (2014). *Epidemiology for public health practices* (5th ed.). Sudbury, MA: Jones & Bartlett.

Gitlin, L., N., Marx, K., Stanley, I. H., & Hodgson. (2015). Translating evidence-based dementia caregiving interventions into practice: State-of-science and next steps. *The Gerontologist,55*(2), 210-226. doi:https://doi.org/10.1093/geront/gnu123

Hamton, J. K., Reiter, T., Hogarth, J., Doerr, J., Bohlack, K., & Popejoy, L. (2014). Using Focus PDSA to improve antipsychotic medication management. *Journal of Nursing Care Quality, 29*(4), 295-302. doi:10.1097/NCQ.0000000000000077

Harzing, A. W., & Alakangas, S. (2016). Google Scholar, Scopus and the web of science: A longitudinal and cross-disciplinary comparison. *Scientometrics, 106*(2), 1-18. Retrieved from http://eprints.mdx.ac.uk/18511/1/gsscowos.pdf

Ingham-Broomfield, R. (2015). A nurse's guide to the hierarchy of research designs and evidence. *Australian Journal of Advanced Nursing, 33*(3), 38-42. Retrieved from http://www.ajan.com.au/vol33/issue3/5broomfield.pdf

Jones, A. M. (2003). The use and abuse of PowerPoint in teaching and learning in the life sciences: A personal overview. *Bioscience Education, 2*(1), 1-13. doi:10.3108/beej.2003.02000004

Justice in Aging. (n.d.). A closer look at the revised nursing facility regulations. *Unnecessary drugs and antipsychotic medications.* Retrieved from http://www.justiceinaging.org/wp-content/uploads/2017/02/Revised-Nursing-Facility-Regulations_Unnecessary-Drugs-and-Antipsychotic-Medications.pdf

King, C., & Voruganti, L. N. (2002). What in a name? The evolution of the nomenclature of antipsychotic drugs. *Journal of Psychiatry & Neurosciences, 27*(3). Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC161646/

Kitchenham, B., Brereton, O. P., Budgen, D., Turner, M., Bailey, J., & Linkman, S. (2009). Systematic literature reviews in software engineering—a systematic literature review. *Information and Software Technology, 51*(1), 7-15. doi:10.1016/j.infsof.2008.09.009

Livingston, G., Kelly, L., Lewis-Holes, E., Baio, G., Morris, S., Patel, N., … Cooper, C. (2014). Nonpharmacological interventions for agitation in dementia: Systematic review of randomized controlled trials. *The British Journal of Psychiatry, 205,* 436-442. doi:10.1192/bjp.bp.113.141119

Marshall, S. D. (2015). Reducing the amount of antipsychotic medication among older adults with dementia in skilled nursing facilities in the Twin Cities area. *Master of Social Work Clinical Research Papers, Paper 492,* 1-64. doi:hp://sophia.stkate.edu/msw_papers/492

Minnesota Department of Health. (2015). Implementing new dementia care training standards for staff working in housing with services settings. Retrieved from https://www.leg.state.mn.us/docs/2015/mandated/150383.pdf

Nash, D. B., Fabius, R. J., Skoufalos, A., Clarke, J. L. & Horowitz, M. R. (2016). *Population health: Creating a culture of wellness* (2nd ed). Burlington, MA: Jones & Bartlett Learning.

Nursing theory. (2016). *Roy adaption model.* Retrieved from http://www.nursing-

theory.org/theories-and-models/roy-adaptation-model.php

Office of the Reviser of Statutes. (2018). *2018 Minnesota Statutes.* Retrieved from

https://www.revisor.mn.gov/statutes/cite/144.6503

Official U.S. Government Site for Medicare. (n.d.a). *Long-term care.* Retrieved from

https://www.medicare.gov/coverage/long-term-care

Official U.S. Government Site for Medicare. (n.d.b). *Skilled nursing facility (SNF) care.*

Retrieved from https://www.medicare.gov/coverage/long-term-care

Okoli, C. (2015). A guide to conducting a standalone systematic literature review.

Communications of the Association for Information Systems, 37 (43), 879-910.

doi:10.17705/1CAIS.0374301574600>

Phillips, L. J., Birtley, N. M., Petroski, G. F., Siem, C., & Rantz, M. (2018). An

observational study of antipsychotic medication use among long-stay nursing

home residents without qualifying diagnoses. *Journal of Psychiatric and Mental

Health Nursing, 25*(8), 463-474. doi:10.1111/jpm.12488

Roediger, H. L. (2005). The positive and negative consequences of multiple choice

testing. *Journal of Experimental Psychology: Learning, Memory, and Cognition,

31*(5), 1155. doi:10.1037/0278-7393.31.5.1155

Santana, G. C. (2014). Social innovation: Moving the filed forward. A conceptual

framework. *Technological Forecasting and Social Change, 8,* 42-51.

doi:http://dx.doi.org/10.1016/j.techfore.2013.05.008

Shojania, K. G., Sampson, M., Ansari, M., Ji, J., Doucette, S., Moher, D. (2008). How

    quickly do systematic reviews go out of date? A survival analysis. *The Journal of*

    Emergency Medicine, 34(2), 224-233.

    doi:https://doi.org/10.1016/j.jemermed.2007.11.022

Steinberg, M., & Lyketsos, C. G. (2012). Atypical antipsychotic use in patients with

    dementia: Managing safety concerns. *American Journal of Psychiatry, 169*(9),

    900-906. doi:10.1176/appi.ajp.2012.12030342

Stratis Health. (2017). Minnesota nursing homes decrease use of antipsychotics.

    Retrieved from

    http://www.stratishealth.org/pubs/qualityupdate/sp15/antipsychotics.html

Terry, A. J. (2015). *Clinical research for the doctor of nursing practice. (2nd ed.).*

    Burlington, MA: Jones & Bartlett Learning

Unroe, K. T., Ouslander, J. G., & Saliba, D. (2018). Nursing home regulations redefined:

    Implications for providers. *Journal of The American Geriatrics Society, 66,* 191-

    194. doi:10.1111/jgs.15128

Watson-Wolfe, K., Galik, E., Klinedinst, J., & Bradnt, N. (2014). Application of the

    antipsychotic use in dementia assessment audit tool to facilitate appropriate

    antipsychotic use in long-term care residents with dementia. *Geriatric Nursing,*

    35(1), 71-76. doi:https://doi.org/10.1016/j.gerinurse.2013.09.002

West, E., Stuckelberger, A., Pautex, S., Staaks, J., & Gysels, M. (2017). Operationalizing

    ethical challenges in dementia research-A systematic review of current evidence.

    Age and Aging, 46(4), 678-687. doi:https://doi.org/10.1093/ageing/afw250

Wysocki, A., Thomas, K. S., & Mor, V. (2015). Functional improvement among short-stay nursing home residents in the MDS 3.0. *Journal of American Medical Director Association, 16* (6), 470-474. doi:10.1016/j.jamda.2014.11.018

Zuidema, S. U., Johansson, A., Selbaek, G., Murray, M., Burns, A., Ballard, C., & Koopmans, R. T. (2015). A consensus guideline for antipsychotic drug use for dementia in care homes. Bridging the gap between scientific evidence and clinical practice. *International Psychogeriatrics, 27*(11), 1849-1859. doi:10.1017/S1041610215000745

Appendix A: PowerPoint Presentation

Non-pharmacological interventions for behaviors and
psychiatric symptoms of dementia

Centers for Medicare and Medicaid And department of health initiatives

Jared Bielanski, APRN, CNP and DNP Student

Objectives

- Learn the dangers of antipsychotic medication use in residents with dementia
- Discuss legislation and local initiatives to reduce antipsychotic medication use in those with a dementia diagnosis
- Identify alternative methods based on research and scientific evidence
- Discuss best practices to provide interventions for behaviors and psychiatric symptoms of dementia
- Evaluate the efficacy of non-pharmacological interventions
- Evaluation of classroom learning via a blinded pre and posttest

Background

- Antipsychotic medications inappropriately used in elderly dementia patients for BPSD
  - Risks for serious adverse health consequences (Chen et al., 2013)
- CMS directive for decreased use in LTC patients with dementia (Centers for Medicare and Medicaid Services, 2017)
- Knowledge gaps related to alternative interventions
  - Long-term care (LTC) staff not well-trained regarding non-pharmacological interventions (Zuidema et al., 2015)

Problem

- 25% patients in LTC are prescribed antipsychotic medications (Watson-Wolfe et al., 2014).
  - Limited efficacy in those with dementia
  - Increased risks for cardiovascular events, weight changes, falls, death (Bangash et al., 2017; Chen et al., 2013; Watson-Wolfe et al., 2014)
- Lack of effective alternative medications
- Lack of appropriate, evidence-based non-pharmacological interventions (Chen et al., 2013; Livingston et al., 2014)
- LTC staff lack training regarding interventions and evidence of non-pharmacological interventions (Zuidema et al., 2015)

Purpose

- Provide education to LTC nursing staff
  - Dangers of antipsychotic medication use
  - Non-pharmacological intervention use when appropriate
- Increase use of non-pharmacological interventions when appropriate
  - Address knowledge deficits
  - Increase comfortability of non-pharmacological interventions
  - Increase quality of care
  - Provide safe care

Significance

- Nursing Practice
  - CMS directive
  - Evidence-based practice (Bangash et al., 2017; Center for Medicare and Medicaid Services, 2017)
  - Do no harm
- Social Change
  - Change to norms
  - Positively impact the populace (Santana, 2014)
  - Care that is deserved
- DNP Essentials
  - Evolution nursing practice
  - Ethics/Safe care
  - Reduce risk
  - Improve population outcomes (American Association of Colleges of Nurses, 2006)

Grading of Literature
Hierarchy of Research and Evidence

- Level 1
  - Systematic Reviews and Meta-analysis
- Level 2
  - Critically Appraised Topics/ Evidence synthesis
- Level 3
  - Critically-Appraised Individual Articles/Article Synopses
- Level 4
  - Random Controlled Trials (Ingham-Broomfield, 2015).

Grading of Literature
Hierarchy of Research and Evidence (Continued)

- Level 5
  - Cohort Studies
- Level 6
  - Controlled Studies, Case Series, Case Reports
- Level 7
  - Ideas, Opinions, Anecdotes, Editorials (Ingham-Broomfield, 2015)

Literature Review
Dangers of Antipsychotic Medications

- Antipsychotic Medications Discovered in 1950s
  - Used to treat serious psychiatric disorders
- Mortality risk 1.5-1.7 greater in those with dementia (Steinberg & Lyketsos, 2012) Grade 1
- 3 times risks for hospitalization or death within 30 days of initial use (Steinberg & Lyketsos, 2012) Grade 1
  - Serious Side effects including cardiovascular events, weight changes, falls, death (Bangash et al., 2017; Chen et al., 2013) Grade 5; (Watson-Wolfe et al., 2014) Grade 1
- Lack of effective alternative medications
  - Black Box Warning in Dementia use via FDA
  - American Society of Geriatrics Beers List (Steinberg & Lyketsos, 2012) Grade 1
- Studies question safety and efficacy
- Few alternative medications (Chen et al, 2013;) Grade 5; (Steinberg & Lyketsos, 2012) Grade 1

Literature Review
Potential Causes of BPSD

- 80-97% of those with dementia will exhibit BPSD (Bangash et al., 2017) Grade 5; (Watson-Wolfe, Galik, Klinedinst, & Bradnt, 2014); Steinberg & Lyketsos, 2012) Grade 1
- Evidenced-based guidelines and CMS regulations recommend providers rule out other causes for BPSD before ordering antipsychotic medications
  - Pain
  - Toileting needs/Incontinence
  - Boredom/ loneliness
  - Changes in condition
    - Infection
  - Medication interactions
  - Other modifiable factors (Bangash et al., 2017) Grade 5; (Steinberg & Lyketsos, 2012; Watson-Wolfe, Galik, Klinedinst, & Bradnt, 2014) Grade 1 (Center for Medicare and Medicaid Services, 2017; Justice in Aging, n.d) Grade 7
-

Literature Review
Effective Interventions

- Structure activities
  - Combinations of multiple non-pharmacological interventions (Chen et al., 2012; Livingston et al.) Grade 5
- Music Therapy
  - Effective prevention and intervention for BPSD (Chen et al., 2012) Grade 5; (Livingston et al.) Grade 1
- Sensory Interventions
  - Therapeutic Touch
  - Massage (Livingston et al.) Grade 1
- Care Mapping
  - Assessment of each patient with BPSD
    - Determining root-cause
    - Intervention based on root-cause
    - Patient-Centered Care (Chen et al., 2012; Grade 5; (Livingston et al.) Grade 1

Literature Review
Other Interventions

- Mixed Results
  - Light therapy
  - Aroma therapy (Livingston et al., 2014) Grade 1
  - Exercise Programs (Chen et al., 2012; Grade 5; (Livingston et al., 2014) Grade 1

Literature Review:
When to Use Antipsychotic for BPSD

- Antipsychotics sometimes needed for BPSD
  - Non-pharmacological interventions always tried first (Center for Medicare and Medicaid Services, 2017 Grade 7.; (Marshall, 2015) Grade 1
  - When non-pharmacological interventions ineffective
    - Severe agitation (Chen et al., 2012;)Grade 5; Livingston et al., 2014; Zuidema et al., 2015) Grade 1
- CMS Laws and Policies
  - In place to reduce unnecessary use of antipsychotics (Center for Medicare and Medicaid Services, 2017) Grade 7
  - Use lowest doses possible
  - Use no more than 6-12 weeks
    - Reassess efficacy ((Bangash et al., 2012) Grade 5

Closing

- Limitations
  - Lack of Random Controlled Trials, Metaanalysis, Systematic reviews
    - Ethical Considerations
      - Vulnerable populations (West, et al., 2017)
    - Patient-centered interventions
    - Use medications when appropriate
- Acknowledgement
- Thank you!

References

- American Association of Colleges of Nursing. (2006). *The essentials of doctoral education for advanced nursing practice.* Retrieved from: http://www.aacnnursing.org/Portals/42/Publications/DNPEssentials.pdf
- Bargash, A., Stubbs, R., Khan, F., Samnani, S., Aziz, H., & Mitra, M. (2017). Association between antipsychotics and adverse outcomes in dementia. *Progress in Neurology and Psychiatry, 21(4)*. 20-26. Doi: www.progressnp.com
- Center for Medicare and Medicaid Services. (2017). State operations manual appendix PP-Guideline for surveyors for long term care facilities table of contents (Rev. 173, 11-22-17). Retrieved from: https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/som107ap_pp_guidelines_ltcf.pdf
- Chen, R., Liu, C., Lin, M., Peng, L., Chen, L., Liu, L., Chen, L. (2013). Non-pharmacological treatment reducing not only behavioral symptoms, but also psychotic symptoms of older adults with dementia: A prospective cohort study in Taiwan. *Geriatrics and Gerontology international*, 1-7. doi: 10.1111/ggi.12126
- Ingham-Broomfield, R. (2015). A nurses' guide to the hierarchy of research designs and evidence. *Australian Journal of Advanced Nursing, 33(3)*, 38-42. Retrieved from http://www.ajan.com.au/vol33/issue3/3broomfield.pdf
- Justice in Aging. (n.d.). A closer look at the revised nursing facility regulations. *Unnecessary drugs and antipsychotic medications.* Retrieved from: http://www.justiceinaging.org/wp-content/uploads/2017/02/Revised-Nursing-Facility-Regulations_Unnecessary-Drugs-and-Antipsychotic-Medications.pdf

References

- Livingston, G., Kelly, L., Lewis-Holm, E., Baio, G., Morris, S., Patel, N., ... Cooper, C. (2014). Non-pharmacological interventions for agitation in dementia: Systematic review of randomised controlled trials. *The British Journal of Psychiatry, 205*, 436-442. doi: 10.1192/bjp.bp.113.141119
- Marshall, S. D. (2015). Reducing the amount of antipsychotic medication among older adults with dementia in skilled nursing facilities in the Twin Cities area. *Master of Social Work Clinical Research Papers, Paper 492*. 1-64. doi: hp://sophia.stkate.edu/msw_papers/492
- Santana, G. C. (2014). Social innovation: Moving the filed forward. A conceptual framework. *Technological Forecasting and Social Change, 82*. 42-51. doi: http://dx.doi.org/10.1016/j.techfore.2013.05.008
- Steinberg, M., & Lyketos, C. G. (2012). Atypical antipsychotic use in patients with dementia: Managing safety concerns. *American Journal of Psychiatry, 169(9)*, 900-906. doi: 10.1176/appi.ajp.2012.12030342
- Watson-Wolfe, K., Galik, E., Klinedinst, J., & Brodnt, N. (2014). Application of the antipsychotic use in dementia assessment audit tool to facilitate appropriate antipsychotic use in long-term care residents with dementia. *Geriatric Nursing, 35(1)*. 71-76. doi: https://doi.org/10.1016/j.gerinurse.2013.09.002
- West, E., Stuckelberger, A., Pautex, S., Staaks, J., & Gysels, M. (2017). Operationalizing ethical challenges in dementia research-A systematic review of current evidence. *Age and Aging, 46(4)*, 678-687. doi: https://doi.org/10.1093/ageing/afw250
- Zuidema, S. U., Johansson, A., Selbaek, G., Murray, M., Burns, A., Ballard, C., & Koopmans, R. T. (2015). A consensus guideline for antipsychotic drug use for dementia in care homes. Bridging the gap between scientific evidence and clinical practice. *International Psychogeriatrics, 27(11)*. 1849-1859. doi:10.1017/S1041610215000745

Appendix B: Pretest and Posttest Questions

Antipsychotic Medication Use in Dementia: Dangers and Alternatives
(for 2-10, correct answers are highlighted in yellow)

1) On a scale of 1-10, how comfortable are you at implementing
   nonpharmacological interventions?

   _____

2) What are some serious adverse consequences of Using Antipsychotic Medications
   in Dementia?

   A: seasonal allergies, acne, dry mouth
   B: Weight changes, cardiovascular events, falls, death
   C: Stroke, pneumonia, personality changes, GI bleeding
   D: chest pain, dizziness, falls, shortness of breath

3) CMS regulations Encourage the Use of Antipsychotic Medications
   True
   False

4) Antipsychotic medications were first used in the _____ for the purpose of _____

   A: 1990s; bipolar disorder
   B: 1950s; schizophrenia
   C: 1970s; nausea
   D: 1990; Dementia

5) Which of the following are considered effective evidence-based interventions for
   Behaviors and Psychiatric Symptoms of Dementia?

   A: Music Therapy, structured activity programs, interventions based on root-
   cause analysis
   B: Aromatherapy, exercise programs
   C: Nothing is evidence based for BPSD
   D: Seroquel, Ativan, Risperdal

6) A patient is wandering, becoming aggressive and holding onto the front of their
   pants. They are becoming anxious and calling out. You should try one of the
   following:

   A: Assist them to use the bathroom
   B: Leave them alone as they will likely become aggressive anyway

C: Play some soothing music
D: Place a lavender sticker on their shirt

7) True or False, nonpharmacological interventions should be used first prior to an antipsychotic medication?

True
False

8) There is a black box warning for antipsychotic medication use in dementia

True
False

9) What is Dementia Care mapping?

A: Assessing each patient with BPSD to determine root-cause and appropriate intervention to decrease agitation
B: Providing a map for dementia residents to assess their abilities in new situations
C: Placing residents with dementia into structured groups based on their favorite activities to keep them calm
D: Finding out what a patient "Treasured" in their life

10) Which of the following is an effective evidence-based nonpharmacological intervention for BPSD?

A: Aroma Therapy
B: Exercise Programs
C: Therapeutic Touch
D: Antipsychotic medications

Appendix C: Pretest and Posttest Comparison

Question	Pre-Test Average %	Post-Test Average %	Difference	
On a scale of 1-10, how comfortable are you at implementing non-pharmacological interventions?	8.33	9.25	0.92	
What are some serious adverse consequences of Using Antipsychotic Medications in Dementia?	50	100	50	
True or False CMS regulations Encourage the Use of Antipsychotic Medications	83	83	0	
Antipsychotic medications were first used in the _____ for the purpose of _____	58	100	42	
Which of the following are considered effective evidence-based interventions for Behaviors and Psychiatric Symptoms of Dementia?	67	100	33	5
A patient is wandering, becoming aggressive and holding onto the front of their pants. They are becoming anxious and calling out. You should try one of the following:	100	100	0	6
True or False, non-pharmacological interventions should be used first prior to an antipsychotic medication?	92	92	0	7
True or False, there is a black box warning for antipsychotic medication use in dementia	100	100	0	8
What is Dementia Care mapping?	83	100	27	9
Which of the following is an effective evidence-based non-pharmacological intervention for BPSD?	25	75	50	10
Total Score # 2-10	74	95	21	
Posttest Additional Question				
On a scale of one to ten how satisfied were you with the presentation? 0 = not satisfied at all and 10 means highly satisfied	n/a	9.67	n/a	n/a