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## Exploring Non-Pharmacological Interventions for Behavioral Symptoms of Dementia: A Social Work Perspective

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**Exploring Non-Pharmacological Interventions for Behavioral Symptoms of  
Dementia: A Social Work Perspective**

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The Clinical Research Project is a graduation requirement for MSW students at St. Catherine University – University of St. Thomas School of Social Work in St. Paul, Minnesota and is conducted within a nine-month time frame to demonstrate facility with basic social research methods. Students must independently conceptualize a research problem, formulate a research design that is approved by a research committee and the university Institutional Review Board, implement the project, and publicly present the findings of the study. This project is neither a Master's thesis nor a dissertation.

**Abstract:**

Dementia is a progressive neurological brain disease that affects the quality of life of those diagnosed (Goldberg, 2017; Tjia et al., 2017). The diagnosis of dementia affects the patient and the caregiver in different ways: those diagnosed with dementia may have difficulty in thinking, memory and physical or psychological skills. Those diagnosed with dementia may experience behavior and psychological symptoms of dementia (BPSD). Behavioral symptoms can be heterogeneous and unpredictable, which can be difficult for caregivers to manage (Cerejeira et al., 2012). Social workers are able to connect families with in-home services and institutional care services if requested by the caregivers (Gould, 2013; Pearce, 2012). Social workers in the nursing home setting advocate for personal preference to be used including in treatment options for BPSDs. Throughout this paper it will explore the social work perspective on what type of non-pharmacological and pharmacological interventions are seen to be more beneficial. Social Workers, who participated in this study, have reported person-centered care can be beneficial as a non-pharmacological intervention. Additional information on the social work perspective and their role in dementia patients will be explored throughout this paper.

*Key Words:* behavioral and psychological symptoms of dementia, dementia, non-pharmacological

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## Exploring Non-Pharmacological Interventions for Behavioral Symptoms of Dementia: A Social Work Perspective

Dementia and the effect on the families can be stressful due to the behaviors those diagnosed exhibit and this concern will continue to be a problem in the future. As the baby boomer generation ages, dementia or any other form of cognitive impairment will increase (Alves, 2013). Those individuals who are 60 years of age or older are 5%-7% more likely to have a diagnosis of dementia. Dementia is a progressive neurological brain disease that will inhibit thinking, memory and physical or psychological behaviors (Goldberg, 2017; Tjia, Lemay, Bonner, Compher, Paice, Field et al., 2017). Working with families of those diagnosed with dementia, the need can vary. Social workers can be available to support the individual or their family system to help advocate for early diagnosis and provide education. Social workers can help the family to explore treatment options in order to find one that best benefits their loved one (Gould, 2013). Obtaining a diagnosis of dementia can be difficult due to physicians not having enough education; for a more accurate diagnosis, this typically comes from a psychiatrist (Burstow, 2015). Often, in many situations, dementia symptoms are left undiagnosed or are diagnosed incorrectly as mild cognitive impairment. Dementia is a cognitive deterioration affecting activities of daily living (ADLS), such as grooming dressing and bathing (NICE, 2011). Those diagnosed with a form of dementia can experience a decrease in participation in their activities or hobbies and an increase in agitation, aggression or other behavioral symptoms of dementia (BPSD). Behavioral and psychological symptoms of dementia are seen through behavioral symptoms such as aggression, agitation, hallucinations, and anxiety along with other emotions and can lead to increase in nursing home placement (Okura et al., 2011).

Behavior and Psychological Symptoms of Dementia (BPSD) are more evasive and are harder for caregivers to manage, leading to institutionalized care for their loved ones (Deudon, Maubourguet, Gervais, Leone, Brocker, Carcaillon, et al., 2009). Caregivers are able to manipulate stimuli with modifying activities that reduce anxiety and aggression in order to alleviate burdens (Sung et al., 2012). Agitation and anxiety are taxing behaviors on caregivers, as it can be unpredictable and hard to manage as caregivers.

Interventions and behavioral stimulation can be hard to manage, and interventions may have a financial burden on the caregivers (Sung et al., 2012). Caregiver burden has been linked to Alzheimer's disease affecting the quality of life of the caregiver due to stress and management of their loved ones' behavior. Reports show that women are more likely to be caregivers to men due to women's nurturing personality traits (Anderson, 2014). In order to decrease caregiver burden and quality of life, early interventions on the disease management has correlated to a decrease in caregiver burden (Chen et al., 2017). Due to concerns about side effects of medications, non-drug interventions should be attempted first to manage behaviors. Understanding and exploring both pharmacological and non-pharmacological interventions will help in easing caregiver burnout through education. At first, exploring non-pharmacological interventions such as physical exercise, music therapy, and validation therapy among others, can be effective treatment options (Tjia, 2017). If those treatment options are not benefiting the patient properly, then communications with their physician, or other medical professionals about pharmacological treatment options may be the next step. BPSDs can be decreased using pharmacological treatments such as antidepressants, mood stabilizer or other SSRI's, cognitive enhancers or lastly antipsychotic medications. It can be beneficial to understand the diagnosis

before you can understand the treatment options. Talking with those who have experience in researching and working with those who have dementia would include social workers.

Social workers are ones that help to normalize the disease process when dealing with individuals and their caregivers. There are 15 million American family caregivers working as a caregiver for more hours of those diagnosed with dementia than those whose loved one does not have a diagnosis of dementia (bv, 1999). Those who serve as caregivers do not need to be family, rather the definition of family can be those that care for one another (Pearce, 2012). Social workers can help families get in touch with in-home services and institutional care such as nursing homes or caregiver support services in order to establish a "new normal" (Gould, 2013; Pearce, 2012).

It is important to focus on the strengths of the individual and what past hobbies or interests were important to them. Activities or hobbies they enjoyed participating in such as listening to music or exercising may be a beneficial intervention to help to benefit their cognition (Pearce, 2012). It is important to let them make the decision to participate in activities of their choice. Awareness is growing as the diagnosis of cognitive impairment rises, but there is no cure yet for these types of diseases- only ways to manage behaviors and slow the disease progression (Alves et al., 2013). Families may feel that there is no way to stop the progression of the disease, but the use of medications and/or non-pharmacological interventions can provide moderate benefits to behavioral symptoms (Tjia et al., 2017).

Dementia or any type of cognitive impairment can affect people in many different ways. Caregivers can be valuable to their loved ones for comfort or provide information to help form treatment options for their loved ones. Caregivers are able to identify preferences that their loved one may have on what type of stimulation would be beneficial. Self stimulation is



identify based on personal preferences, which has been shown to be more effective than those chosen by facility staff or caregivers who are unfamiliar with the patient's likes or dislikes (Cohen-Mansfield, Marx, Dakjeel-Ali, Regier, Thein & Freedman, 2010). If a patient prefers a certain type of intervention or stimulation, it could be more beneficial in improving their cognition over time. Throughout this paper, it will explore the perspective of social worker's view on the types of BPSDs interventions and its effect on those diagnosed with dementia.

## **Literature Review**

### **Forms of Dementia**

The term dementia is defined as a cognitive decline where delirium or psychiatric disorders cannot explain the type of decline that has progressed (Alves et al., 2013). The core symptom of cognitive impairment or dementia is cognitive deterioration (Livingston, Kelly, Lewis-Holmes, Baio, Morris, Patel, et al., 2014). There are many different types of dementia and understanding them can aid to better treatment options specific to that form. Obtaining a diagnosis of dementia can be at times hard because dementia is undiagnosed, or diagnosed as mild cognitive impairment, or is in an early stage and the physician is not able to diagnose it properly (Burstow, 2015). A confirmation from a neurologist or psychiatrist who is a specialist in mental health can help aid in what type of treatment options can be beneficial. Understanding the treatment options for the specific type of dementia can help to make the intervention more beneficial as dementia affects specific parts of the brain depending on the diagnosis. Another difference in the type of dementia is the symptoms that are displayed throughout the disease process.

**Mild Cognitive Impairment.** The term mild cognitive impairment (MCI) refers to a pre-dementia stage, which may or may not lead to dementia (Chen et al., 2017; Staff, 2016). This

form of dementia is not a normal part of aging (Alzheimer's Association, n.d ). Symptoms of MCI do not exhibit the same characteristics that would lead to a diagnosis of a type of dementia. Examples of normal aging would be at times making a poor decision, forgetting to pay a bill, or forgetting today's date (Alzheimer's Association, n.d). A diagnosis of MCI also does not show signs of behavioral or personality changes (National Institute on Aging, n/d). Those with a diagnosis of MCI are more likely to develop Alzheimer's disease than those who do not have a diagnosis of MCI.

**Alzheimer's Disease.** Alzheimer's disease (AD) is the most common form of dementia that accounts for 60% of the cases of dementia and can set in within seven years (Alves et al., 2012; Bentwich, Doronevsky, Aichenbaum, Shorer & Peretz, 2011). Studies show that 5 million people have been diagnosed with AD, for those who are 85 years of age or older, 50% of those individuals have a diagnosis of AD (Bentwich et al., 2011; Davis, Massman and Doody, 2001; Goldberg, 2017). Those diagnosed may have mood and personality changes and beginning symptoms of AD, which include forgetfulness, and subtle memory loss, trouble with planning, confusion about the day or year and poor judgment skills (Goldberg, 2017). Both AD and vascular dementia show overlap in affecting daily functioning (Caswell, 2016).

**Vascular Dementia.** Those who experience a stroke and have memory issues may have a diagnosis of vascular dementia (Goldberg, 2017). Those with a diagnosis of vascular dementia and the symptoms that are present depend on what part of the brain was affected by the stroke. Vascular dementia can be due to the stop of blood flow to the brain (Caswell, 2016). Vascular dementia begins with symptoms such as trouble organizing, decision-making, and how fast the brain responds to changes (Caswell, 2016; Goldberg, 2017). Those with a diagnosis of vascular dementia can show feelings of disinterest and being withdrawn (Caswell, 2016). Those

diagnosed with vascular dementia can experience difficulty in walking as do those diagnosed with Lewy bodies (Casewell, 2016; Lewy Body Dementia Association, n/d).

**Dementia with Lewy Bodies.** This form of dementia is caused when abnormal proteins in the brain called alpha-synuclein build-up and cause changes in the cognition, movements and behavior (Lewy Body Dementia Association, n/d). These proteins are formed in the part of the brain known as the cortex (Goldberg, 2017). This form of dementia is also called Lewy body dementia and affects 1.4 million people. This disease and their symptoms can be complex and affects the person's behavior. Those diagnosed with dementia with Lewy bodies can show symptoms of memory problems, visual hallucinations, paranoia, unusual sleep patterns and periods of staring into space (Goldberg, 2017).

**Other Forms of Dementia.** There are many different forms of dementia: Parkinson's, Mixed Dementia, Frontal Lobe, Huntington's and Creutzfeldt - Jakob disease (Goldberg, 2017). Many of these types of dementia show different behavior characteristics such as personality changes, sudden lack of ambition, impairments in judgment and reasoning skills are behavioral characteristics. Parkinson's disease affects the nervous system and symptoms develop 10 years after the disease has begun. Of those who experience a nervous system disease- 50-80% run the risk of developing Parkinson's disease. Mixed dementia is a combination of two forms of dementia (Goldberg, 2017). Frontal Lobe Dementia (FTD) is a result of cell damage in the brain and can impair judgment, emotions and speech. Huntington's disease is a brain disorder that is caused by genetic defect that is inherited and passed down through family. The symptoms of this disease will be present around the ages of 30 and 50. Creutzfeldt - Jakob disease is a rare form that is affected by abnormal proteins in the brain changing to abnormal shapes. Due to the abnormal proteins forming, dementia symptoms appear suddenly and worsen quickly. Those

diagnosed will show signs of depression, sleep problems, jerky movements and confusion.

Reports show that more than 400,000 of those living with a form of dementia are not receiving support or treatment options due to not having a proper diagnosis (Burstow, 2016). Those that have a diagnosis such as one of the aforementioned have better treatment options tailored to symptoms of progression of that form of dementia.

Those who have been diagnosed can show different progressions of the disease depending on their diagnosis and the person themselves. Those with any form of cognitive impairment have been shown to have a low stress threshold, making them less able to manage their stress due to their inability to process external stimuli (Sung, Lee, Li & Watson, 2012). Due to the impairment of their cognition and difficulty processing external stimuli, those with dementia express their feelings in behaviors due to the inability to communicate or process their emotions. Some of these behaviors include agitation; sleep disturbance, or feelings of restlessness (Douglas, James & Ballard, 2004). Those who are diagnosed with dementia or a form of cognitive impairment may not be screened for behavioral symptoms and may not exhibit symptoms (Gitlin, Kales & Lyestsos, 2012).

### **Behavioral Symptoms**

Behavioral and psychological symptoms of dementia (BPSD) are present in those who have dementia and can be seen in each individual differently- BPSDs affects 90% of cases of dementia (Cerejeira, Largato & Mukaetova-Ladinska, 2012). Behavioral symptoms affect both the caregiver and those diagnosed as BPSDs are common and can lead to distress. BPSDs are known as “challenging behaviors” (p. 1)(Heerema, 2017). Social Workers can help the caregiver and individual identify signs and characteristics of BPSDs. The characteristics of BPSD include: cognitive impairment, delusions, aggression, agitation, disorientation, inability recognize objects,

hallucinations, sleepwalking and wandering, among others (Gitlin et al., 2012; Tjia et al., 2017). Behavioral symptoms or neuropsychiatric symptoms are heterogeneous and unpredictable (Cerejeira et al., 2012). They affect the perceptions, motor and emotional functions of those who have been affected by the disease. Environmental factors can affect the characteristics of the neuropsychiatric symptoms of dementia (Cerejeira et al., 2012). An example of this is crowds leading to overstimulation, causing agitation or aggression. These behaviors can lead to interventions being used to modify or calm the behavior. Behaviors that are not calming are ones that are forms of psychosis, such as hallucinations and delusions (Cerejeira et al., 2012).

BPSDs are also called neuropsychiatric symptoms, which include psychosis, agitation, irritability, sleep disturbances and apathy; these symptoms are very common in older adults with dementia (Cerejeira et al., 2012; Okura 2011). Hallucinations and delusions are grouped under the term of psychosis and can remain consistent in those diagnosed with cognitive impairment (Cerejeira et al., 2012). Symptoms or behaviors can affect men and women differently- agitation is more common in men with dementia, while women experience depression or anxiety more than men (Chen et al., 2017). It is reported that women experience Alzheimer's disease more frequently than men due to life expectancy for women being greater (Anderson, 2014). Men are more likely to experience behaviors that lead to institutional care due to their strength and larger build. Concerns about aggression and increased confusion are more prevalent in men. Gender, race, duration of the disease, and amount of behavioral symptoms present affect the disease and intervention used. In one study assessing over 260 participants, 90% showed signs of at least one behavioral symptom. This was measured by a neuropsychiatric inventory (NPI) test measuring mental and behavioral symptoms in 12 domains (Chen et al., 2017). The NPI is an instrument used to extensively assess the BPSDs (Cerejeira et al., 2012).

Due to the effect of BPSDs, families and caregivers can experience a poor quality of life (Cerejeira et al., 2012). Stress can be caused by the unknown on how to treat the behaviors and what treatment options would benefit their loved ones most. It is reported that those who are diagnosed with dementia are not screened for BPSD's, rather symptoms can develop over time (Gitlin et al., 2012). Those who show symptoms of BPSDs are screened using a variety of scales such as Neuropsychiatric Inventory (NPI), The Brief Psychiatric Rating Scale (BPRS) and Clinical Global Impression (CGI) to determine the severity of their behavioral symptoms (Yeh & Ouyang, 2012). Family's reaction to interventions can vary. Some may advocate for pharmacological interventions and some for non-pharmacological interventions. Caregivers are knowledgeable on likes, dislikes and preferences based on their loved one's past interest or hobbies and this can lead to more appropriate treatment options to be found (Cohen-Mansfield et al., 2010).

## **Interventions**

### **Types of non-pharmacological interventions**

Social Workers, most times, are not educated on medications in their schooling. Social Workers learn this knowledge from practicing in the field and learning from interdisciplinary staff. It is reported that social workers are needed to have knowledge of substances and drug issues and how to communicate it to families and discuss self-determination (Galvani, 2006; Ruffalo, 2016). Social Workers advocate for the right to refuse treatment if their family and or the individual diagnosed so chooses (Ruffalo, 2016). Those who prescribe or communicate for the benefits and use of the medication may advocate for the medication to be used, rather than respect the right of self-determination or refusal of the medication. Residents have the right to be informed of their care, participate in the planning process and be informed of changes to their

plan of care (Minnesota Department of Health, 2016). Social workers work with interdisciplinary teams regularly, develop and implement policies that affect the resident's care- this includes having at least a basic knowledge of interventions both pharmacological and non-pharmacological (NASW, n,d).

Interventions to treat dementia can be determined based on observed behaviors, personal preferences or past experiences; they can help to manage behavioral symptoms of cognitive impairment (Douglas, et al., 2004; Gitlin et al., 2012). Caregivers are able to provide information on past hobbies and preferences. They may have information on what medications did or did not work in the past. Medications and non-pharmacological interventions cannot stop the disease process, but can help to manage or slow the decline. In order to determine the treatment options, the patient needs to be interviewed, or the family needs to be interviewed to determine the symptoms (Gitlin et al, 2012).

Dementia affects patients differently and interventions can have both positive and negative effects. When some families hear the term dementia or cognitive impairment, they may be concerned about the quality of life and how it affects their loved one. As the patient continues to progress in their cognitive impairment, they may experience safety concerns due to BPSDs (Tjiaet al, 2017). Some forms of dementia are related to an increase in specific types of BPSD such as sleep disturbances, which are more common in those with vascular cognitive impairment, while changes in behavior are more common in those diagnosed with frontal lobar degeneration (Cerjeira et al, 2012; Chen et al, 2017). Some families or patients diagnosed with dementia will have preferences as to what type of interventions they prefer to use. Studies show that non-pharmacological interventions do not have the same amount of risk as pharmacological interventions such as anti-psychotic medications (Gitlin et al., 2012). Although some families

prefer to use pharmacological treatment option, as they want their loved one to stop doing what they are doing as far as BPSD.

### **Pharmacological Treatments**

Many types of pharmacological treatments are used to treat BPSDs. Different types of pharmacological treatments are used to treat BPSDs-these medications include antidepressants, cognitive enhancers, mood stabilizers and antipsychotic medications (Rattinger, Burcu, Dutcher, Chhabra, Rosenberg, Simoni-Wastila, et al., 2013). Some of these medications are used are to treat side effects of comorbidities such as pain. Comorbidities are additional medical conditions that affect the dementia patient at the same time as their cognitive impairment; it affects more than 5.4 million dementia patients in the United States (Gitlin et al., 2012). Medications such as antidepressants, antipsychotics and sedative medications, when used, are documented upon to see possible side effects (Rattinger, et al., 2013). The documentation can be observations from the viewpoint of the caregiver or staff in an institutional care center. Cognitive enhancers were reported to be the least used medication, while antidepressants were used more often.

**Cognitive enhancers:** The FDA has approved cognitive enhancing medications such as donepezil, galantamine and memantine, which has been shown to improve alertness and other forms of cognitive performance (Mehlman, 2004). These medications are shown to improve the cognition in those who are diagnosed. These medications can show improvements in alertness, but they do have side effects. In a study using the medication Donepezil, after the participants took the medication for 3 months, they scored higher on the Mini-Mental State Examination (SSME) by 1.9 points (Howard et al., 2012). This study was done by looking at 295 participants from the community and their reactions to continuing or discontinuing Donepezil. Cognitive enhancing medications can show side effects such as insomnia, fatigue, vomiting and anorexia.



It is reported that the safety of these medications is still being researched. Medications can be used to enhance cognitive functioning depending on the level of severity, but the FDA has approved medication to treat specific forms of dementia, one of them being Alzheimer's disease.

***Medications to treat Alzheimer's disease:*** Acetylcholinesterase (AChE Inhibitors) are used to treat mild to moderate forms of Alzheimer's disease but this treatment, if taken, should not be interrupted (Schwarz, Froelich & Burns, 2012). AChE's are medications that target to increase the concentration of acetylcholine at the site where neurotransmission takes place in the brain (NICE, 2011). Medications such as Galantamine is another AChE inhibitor that works in the same way as other AChE inhibitors, but modulates that activity that takes place at the nicotinic receptors. AChE inhibitors are medication similar to donepezil, galantamine and rivastigmine and are all used to treat Alzheimer's disease. When deciding on treatment options such as AChE, a benefit is needed on cognition and BPSDs. When these medications are used, it is reported that they should be started at the lowest dosage that is able to be prescribed. Studies show that interrupting or discontinuing medications such as AChE inhibitors can lead to a rapid decline in cognitive function (Schwarz et al., 2012). Combining medications, such as AChE and antidepressant medications, when approved to be safe, then a monotherapy can prove to be a better benefit when used with another medication. Medications such as AChE are not beneficial for those who have been diagnosed with depression and dementia (Ford & Almeida, 2017). Antidepressant medications can be more beneficial to treat depressive symptoms in those diagnosed with both depression and dementia.

**Anti-depressants.** Depression can affect those at any age and can co-occur with medical illnesses (U.S. Department of Health and Human Services, 2015) Genetics, organisms in the brain, life circumstances and chemistry can be factors leading to depression. These changes in

**the brain and in life circumstances can lead to the depression.** In a study looking at those who took antidepressant medications for more than 5 years, those participants showed a 77% decreased chance of developing dementia, while those diagnosed with late-life depression show a greater risk (Brodrick & Mathys, 2016). Medications used to treat depression show a concern due to efficiency and possible side effects. Antidepressants are the pharmacological treatment options for treating depressive symptoms in those diagnosed with depression, but also dementia. Those who have been diagnosed with any form of dementia are often treated for depression symptoms (Schwarz et al. 2012). Fluoxetine, citalopram, paroxetine are some of the names of medications categorized as SSRIs (Dixon & Mead, 2013). These medications are not used to improve the cognition in those who take these medications.

Antidepressant medications increase the monoamine levels in the synapse of the brain to delay the mood effect (Brodrick & Mathys, 2016). Medications such as antidepressants have been shown to be beneficial to treat BPSDs (Schwarz et al., 2012). These types of medications, including SSRIs have been reported to be more harmless than other medications that can be prescribed. SSRI medications are selective for the neurotransmitter to help improve the mood of those who show signs of depression (Dixon & Mead, 2013). Pharmacological treatment for dementia, such as SSRIs and other antidepressants work to target the cholinergic system, which is the nerve cells that attach to the neurotransmitter. SSRI medication is the class of antidepressants that are prescribed most (Brodrick & Mathys, 2016).

***Depression and dementia.*** Antidepressant medications can be used in conjunction with other treatment options for dementia. Those who use antidepressant medications and do not have a diagnosis of any form of cognitive impairment or dementia have a higher rate of developing dementia later in life. Depression is poorly recognized in the population of those diagnosed with

dementia as the symptoms overlap (Lau, Babani & McMurray, 2017). Those who are diagnosed with depression have an increased risk of developing dementia or any form of cognitive impairment. While antidepressants are common in the management of depression in those who have a diagnosis of dementia, efficiency and safety of the medication is still a challenge (Ford & Almeida, 2017). Safety of medications and how it affects the patient's brain is a concern for caregivers and their loved ones. Antidepressant and mood stabilizers cannot be used to reverse neurodegenerative disorders, such as Parkinson's.

**Mood Stabilizers.** Mood Stabilizers are medications that are meant to even out emotions. These types of medications have been studied for many years- more recently these types of medications have been studied for how they treat BPSDDs. These medications have been shown to be highly irregular (Heerema, 2017). Many of these medications are known as anticonvulsants and are used to treat seizures. Medications such as mood stabilizers such as Carbamazepine (CBZ) have shown to suppress symptoms of aggression, agitation and hostility. Other medications such as Gabapentin (GPN), in studies, have shown signs of decreasing anxiety, apathy, sleep disturbances and aggression, though they have shown signs of sedation (Yeh & Ouyang, 2012). Medications used to treat BPSDDs are seen as an appropriate option due to the challenging behavior that it caused by the different behaviors such as psychosis and agitation (Schwarz et al., 2012).

Though mood stabilizers have shown to be beneficial in treating BPSDDs, these medications also come with possible long lasting side effects. A mood stabilizer such as Carbamazepine was shown to be effective in treating agitation, but can have negative side effects, decreasing white blood count and interacting negatively with other medications (Heerema, 2017). Other mood stabilizers can result in sedation and the level of sedation varies

depending on the dose of the medication (MAC). The drug, Valproate, had the negative side effect of decreasing brain volume. These medications have an increased risk in mortality-antipsychotic medications such as Haloperidol and Risperidone are ones carry that risk and are considered mood stabilizers (Heerema, 2017; Schwarz et al., 2012). Some antipsychotic medications are categorized as mood stabilizers (Heerema, 2017). Medications such as Benzodiazepines, when used, can have negative impacts on memory ( Merz, 2014). Those who have been prescribed this medication have an increased risk of falls and fractures. This medication, which is an anti-anxiety medication, has been added to the list of inappropriate medications for older adults ( Merz, 2014).

**Anti-psychotic Medications.** Medications are a common form of treating a various number of illnesses, including dementia. Antipsychotic medications are used to treat paranoia, delusions and hallucinations as that causes distress. The use of antipsychotic medications has increased over time as it has shown to reduce agitation, psychosis and aggression but research states that the evidence is not definite (Cerejeira et al., 2012). In the nursing home setting, Congress has issued stricter guidelines in determining appropriateness for medications such as antipsychotic and psychotropic medications have been used more heavily and carry high risks of side effects (Heerema, 2017;Tjia et al., 2017). In response to Congress' stricter guidelines for the use of harmful medications, the Centers for Medicare and Medicaid Services has started a nationwide movement to reduce the number of antipsychotic medications used, which can include side effects such as high risk for complications and death (Heerema, 2017). Antipsychotic medication is widely used to treat behavioral and psychological symptoms of dementia (Wrightman, Fielding, & Green, 2011). Due to concerns of overusing medications in skilled settings such as nursing homes, Congress passed the Nursing Home Reform Act to

eliminate “chemical restraints” (Tjia et al., 2017, p.59). According to the Gerontological Society of America, antipsychotic medications are considered by some “chemical restraints” (p.1)(as cited in Kerns, Winter, Winter, Kerns & Etz, 2017). Some research shows that it can be distressing and difficult for residents to cope with these medications. Those who are taking these medications are at an increased risk for falls or suffering from agitation, sedation, stroke or death (Tjia et al, 2017; Wightman et al., 2011).

Antipsychotic medications, anxiolytics or cognitive enhancers are used as selective serotonin inhibitors to minimize behavioral symptoms or stress caused by dementia (Kerns et al., 2017; Tjia et al., 2017). Those who are taking these types of medications often get put on other medications, which increase sedation or other personality characteristics. Personality characteristics include changes in mood, preferences and patience. Research shows that more families are becoming concerned and are looking for other solutions to treat dementia rather than medication-especially antipsychotic medications (Kerns et al., 2017). Continued research is being done on the effectiveness of this type of medication. One study showed that alternative causes of behavioral symptoms were identified as depression, which should be treated through an antidepressant medication (Cerejeira et al, 2012; Wrightman et al., 2011).

Research states that antipsychotic medications have shown evidence of management of symptoms of agitation and psychotic symptoms. Improvement is said to be modest with one in three or one in four patients taking antipsychotic medications who show improvement (Kerns et al., 2017). Some research disagrees with these previous statements and shows that there is modest to no benefit to those taking antipsychotic medications along with concerns over it increasing cognitive decline (Gitlin, et al., 2012; Livingston et al., 2014). When used to treat behavioral and psychological symptoms of dementia such as agitation, concern over

antipsychotic medications and benzodiazepines affecting cognition increases (Livingston et al., 2014). When taking these types of medications, there is an increased risk of falling and there is also an increased risk in mortality of those taking anti-psychotic medications (Gitlin et al, 2012). Before antipsychotic medication is to be used, information regarding the risk and benefits of antipsychotic medication needs to be discussed with the patient and their family (Kerns et al., 2017). This should be used when the patient is at a risk of harming themselves or others or experiencing distress (Wrightman, Fielding & Green, 2011). Reports show that antipsychotic medications are not to be used as the first type of interventions-other medications and non-pharmacological interventions are used prior. Antipsychotic medications are to be used when safer options have been seen to be ineffective.

### **Non-Pharmacological Interventions**

Some non-pharmacological approaches have been tested and proven to show signs of improvement in cognitive functioning while increasing the patient's social interactions and personal environment (Richeson, 2003). Person-centered care is concept used to describe approaches specific to the patient that is used to help vocalize their preferences in their care (Manthroe & Samsi, 2016). Interventions that are beneficial to the patient are person-centered; an example would be cognitive stimulation through physical activity, which promotes cognitive stimulation (Alves et al., 2013; Gitlin et al., 2012). There are several non-pharmacological ways of treating cognitive impairment or dementia. Non-pharmacological interventions do not include medications but rather different approaches involving social and physical tasks to participate in or observe; these interventions carry a lower risk to the patient (Douglas et al., 2004; Gitlin et al, 2012). Some different types of interventions include therapies such as music, activity, and aroma or art therapy to modify behaviors or lessen symptoms of dementia (Douglas

et al., 2004). Depending on the interventions used, it can be targeted to a specific behavior or used at a certain time of the day, such as a change of shift in a nursing home (Richeson, 2003). Behaviors such as physical agitation are more apparent in times of boredom such as mealtime and bathing (Cohen-Mansfield et al., 2010). The goal of these interventions is to view the behaviors as a way of expressing unmet needs the person has, but cannot verbalize agitation (Gitlin et al, 2012). If the person is not able to verbalize their need, it can cause the patient to feel threatened and they show that aggression through behaviors (Gitlin et al, 2012).

### **Cognitive stimulation**

Stimulating certain areas of the brain is increasing in popularity in order to prevent cognitive impairment or as a non-pharmacological intervention to treat BPSDs. One type of intervention used to treat dementia is through transcranial magnetic stimulation (Bentwich et al., 2011). This is a new concept that targets or alters specific regions of the brain using magnetic fields to modulate electric currents. This type of stimulation targets certain cortical tissues of the brain to increase or decrease cortical excitability which creates changes in behavior that can be seen lasting a few weeks (Bentwich et al., 2011). Stimulating the correct area of the brain can help with retrieval of memory through brain plasticity as this can be measured by an MRI (Belleville, Clement, Mellah, Gelbert, Fontaine & Gauthier, 2011). The cortical tissue that is stimulated affects changes in behavior including cognitive performance and brain plasticity forms new connections in the brain to reduce cognitive symptoms (Belleville et al, 2011; Bentwich et al., 2011).

Differences in types of brain plasticity include neural plasticity as changes in the neural level or cognitive plasticity or changes in patterns of cognitive behavior (Greenwood & Parasuraman, 2010). Cognitive brain plasticity is common in the aging population as it shows

changes in cognitive behavioral patterns in the brain (Belleville et al., 2011; Greenwood & Parasuraman, 2010). Cognitive brain plasticity can increase or remain being healthy in those who are free of disease and increase neural plasticity (Greenwood & Parasurman 2010). Improving episodic memory through visual and semantic stimulation is one way that researchers are looking to increase brain plasticity. Neural plasticity is increased when stimulated through experiences and show changes in neural levels. The areas of the brain that are stimulated using strategies relating to episodic memory are the hippocampus, inferior prefrontal cortex and the cingulate (Belleville et al., 2011). Dietary restrictions, memory activities and early prevention in those with MCI are ways of increasing plasticity of the brain. Memory retrieval strategies can be beneficial if they are relating to topics that are familiar to the patient (Belleville et al., 2011).

**Personal preferences.** Interventions that are used can be different depending on the person and the symptoms that they are presenting. When formulating a plan to treat BPSD, family and the patient, if able, needs to be interviewed to devise a plan of treatment of the present behaviors, assessment and grading the severity of the behaviors is important to identify a treatment strategy (Chen et al., 2017). Coordination, individualization and deliberation can cause person-centered intervention to treat dementia patients more effectively (Manthorpe & Samsi, 2016). Non-pharmacological interventions can be used to help the patient decrease medication use. Caregivers have voiced concerns over medication and changing their behaviors rather than treating behaviors. BPSD can have a psychological impact on caregivers and non-pharmacological person-centered interventions and can help increase well-being on both the patient and caregiver (Cerejeira, 2012; Manthorpe, & Samsi 2016).

**Music.** Non-pharmacological interventions can have a greater effect on behaviors when the intervention is one that the patient prefers or had a past interest in, one intervention being



music therapy. A study looking at the impact of music therapy on those diagnosed with Alzheimer's disease was shown to have an impact on BPSD (Gerdner, 2015). Various interventions with music based off of the heritage of the patient were trialed in a 6-week period. The patient listened to music for 60-minutes, 5 times a day during a period of increased behaviors by a patient. Gerdner (2015) evaluated this patient's behavior when listening to his preferred music, rather than no music or classical music. The results showed a decrease in behaviors when listening to the music that he prefers. During this time, the patient made comments such as "I like music" and "I am having fun, are you having fun? I like this music" (p. 183). Importantly, the music that was selected for him respected his Mexican heritage (Gerdner, 2015). An important adjunctive fact to this study is that musical abilities have shown to reduce behaviors, as music can be preserved in patients (Gitlin et al., 2012). Familiar music was used in another study that showed to decrease anxiety and showed improvements in agitation (Sung et al., 2012). Music specific to the culture of Chinese and Taiwanese has been used in other studies. In this example it includes music from the Mexican culture being "*Guittarras Mexicanas*" and other music from the 1950s and 1970s was used for the patients to play along to the beat (Gerdner, 2015). Stimulation through interventions were chosen for each patient based on their previous occupation, hobbies or interest showed to elicit positive memories from their past experiences (Cohen-Mansfield et al., 2010). A sense of familiarity in an existing environment can show positive feelings in those with dementia. Those feelings can decrease behaviors such as anxiety. The participants expressed these feelings by smiling, clapping their hands and singing along (Sung et al., 2010).

***Animal therapy.*** Activities and interventions specified to past hobbies or interest can show greater benefit to decrease behaviors due to the activity recalling positive memories

(Richeson, 2003, Sung et al., 2012). Training staff on communication skills, taking a person-centered approach with dementia patients, showed effective management for severe agitation (Livingston et al., 2014). One intervention that is becoming more popular is animal therapy and this has been seen to decrease agitation and promote social interaction. In a pilot study completed by Richeson (2003), a Need-Driven Dementia-Compromised Behaviors (NDB) model was used to consider the effects of animal therapy on dementia patients (p.354). The NDB model looked at behaviors as a way for the patient to express unmet needs. This model isolated the behavior and manipulated their social or physical environment to decrease or eliminate the behavior. This research showed that there was improvement in behaviors and an increase in social interactions, but it was a small (Richeson, 2003).

***Physical activity.*** Another way that a patient's preferences can be used as an intervention for treating cognitive impairment is through physical exercise. A study done by Forte et al. (2013) shows that physical activity can enhance inhibitory capacity. This is the deliberate controlled suppression of responses and functional mobility in older adults regardless if they have been diagnosed with any type of cognitive impairment. Those who enjoy physical activity for personal gain or social interaction can benefit from certain type of physical activities (Forte et al., 2013). Dancing has shown in patients to recall positive memories and prevent behaviors such as agitation (Cohen-Mansfield et al., 2010; Sung et al., 2012). Combining physical exercise with cognitive stimulation can help increase memory (Forte et al., 2013).

***Validation therapy.*** Different types of therapy are becoming more common among non-pharmacological interventions, one of them being validation therapy. Validation therapy uses empathy and understanding of how the patient feels (Heerema, 2017). This type of therapy is done by the caregiver or staff member; positive communication validating the patient's feelings.

It can help the patient to recall positive memories with their loved ones such as dancing or singing. The need for companionship is evident in those diagnosed with dementia due to their diagnosis; they can feel a sense of loneliness (Doerr, 2015). Even if someone has dementia or any type of cognitive impairment, they still want their feelings to be validated. (Heerema, 2017). One technique in using validation therapy is reminiscing and matching their emotions. When a patient stated that they want their mom, the caregiver would then use validation therapy showing them they understand their feelings. The caregiver lets them know that their mother is not around at the moment, instead of informing them that their mother is dead (as stated by Heerema, 2017). They hear you understand their emotion and feel the same way.

***Memory recall.*** Other interventions that have shown signs of improvement in those with cognitive impairment include different types of memory tests or cognitive emotional interventions (Cerjeiva et al., 2012). Memory recall interventions have shown improvements in object-name recognition, face-name recognition and object-location recognition (Forte et al., 2013). This type of intervention relies on implicit memory in those diagnosed with AD to integrate physical activity with cognitive stimulation (Forte et al., 2013). Other research has conducted studies where patients participated in imagery, face-name recognition, hierarchical organizations and semantic organization techniques. Through cognitive and physical training, maximum benefit was apparent in studies involving the elderly (Forte et al., 2013). Other techniques that have been used are memory techniques that promote encoding and retrieval through a neuropsychologist (Alves Magahes, Machado, Goncales, Sampaio & Petrosyan 2013). Techniques such as memory recall, simple problem-solving skills, name recognition or various methods of cognitive testing such as MME can help to slow the decline (Alves et al., 2013; Richeson, 2003).

There are many different types of interventions, both pharmacologically and non-pharmacologically, to be considered for decreasing BPSDs (Heerema, 2017 ). Continued research is being done on both pharmacological and non-pharmacological treatments for dementia patients who suffer from BPSDs. Non-pharmacological interventions should be considered before starting a medication as non-pharmacological approaches have been shown to be effective in reducing BPSDs (Heerema, 2017). Non-pharmacological interventions are said to be safer, but pharmacological interventions have been shown to be a safe and effective treatment option (Cerejeria et al., 2012). While patients do have the right to choose what treatment or intervention that are used in their disease process, some interventions can be more effective than others (Ruffalo, 2016). Giving patients a choice in their care by maintaining a person-centered approach may lead to improvements in the disease process, increase socialization and quality of life (Manthorpe & Samsi, 2016).

### **Conclusion**

Both non-pharmacological and pharmacological interventions have shown to be beneficial. Both interventions can be used in conjunction with one another. In order to have appropriate treatment options, assessment on the individual affected and the role their social environment plays needs to be taken into consideration. Input from medical professionals in mental health, social workers and family caregivers are valuable in order to develop a treatment plan involving interventions such as non-pharmacological interventions and pharmacological interventions. Dementia, in any form, affects patients differently and may interfere with the individual's quality of life as they may realize their life is changing, causing stress. Stress can also be felt on the caregivers as they are trying to adjust to a new normal and manage possible BPSD' that their loved one is experiencing. This is a common occurrence and is going to affect

many others in the coming years. Families turn to different intervention options to try to help manage the stress and decrease BPSDs. Social workers are able to advocate and provide information to families in need. Those living with dementia can live in many different environments such as: institutional care settings - nursing homes, assisted living. Some of those diagnosed chose to remain in their homes.

Continued research has been done on non-pharmacological interventions such as cognitive stimulation, physical exercise, animal and music therapies. Those diagnosed with any form of dementia suffers from behavioral or psychological symptoms (Gitlin et al., 2012). Certain medications are used to treat different behavioral symptoms, such as agitation, aggravation and hallucinations among others. Even though research has been done, there are still many other types of interventions that can help those suffering with dementia. Both pharmacological and non-pharmacological interventions are targeting active parts of the brain that affect Alzheimer's disease and are beginning to develop, specifically in non-pharmacological interventions (Bentwich et al., 2010). Other treatment options include interactions that increase social interaction through the use of memory techniques and memory retrieval techniques (Alves et al., 2013; Richeson et al., 2003). The benefits of non-pharmacological interventions on those with cognitive impairment can lead to improvements in behaviors, and harmful medication to decrease or not be used.

Though pharmacological and non-pharmacological interventions have shown to increase cognition or memory recall, to this day there is no cure for dementia. There are interventions that are used can slow the progression, but will not eliminate it completely. I will answer the research question of the effects of interventions on those who experience BPSDs by interviewing social workers at nursing homes throughout the state of Minnesota. They will be asked to give

their opinion on their perspectives on the effects of non-pharmacological interventions on their dementia patients, if such interventions are used. Social workers are the ones who are the voice for the residents in nursing homes. What is the social worker view on effects of BPSD interventions used for the treatment of dementia?

### **Conceptual Framework**

#### **Maslow's Hierarchy of Needs**

While this paper is exploring both non-pharmacological and pharmacological interventions in the treatment BPSDs, it is important to see where these behaviors originated. The most basic human needs, defined in Maslow's hierarchy of needs, are "physiological needs of food, water, sleep and warmth and safety needs of safety and protection" (McLeod, 2007). Research has stated that BPSDs are reactions due to unmet needs of the individual with dementia, when they are not able to voice their needs themselves (Douglas et al., 2004). Self-achievement is the highest need of accomplishment through self-fulfillment and achieving their potential in their life (McLeod, 2007). Research shows that every person has the desire to continue moving up the ladder towards self-actualization, dementia can impair this desire. Maslow stated that needs motivate people, those diagnosed with dementia have subjective needs such as the need for comfort, when the needs are not met, they are considered to be deficiencies (McLeod, 2007; Scholxel- Dorenbos, Meeuwsen & Rikkert, 2010).

**Unmet need.** Those diagnosed with dementia may have unmet needs they are not able to express and are expressed through BPSDs. It can be difficult for those who are diagnosed with dementia to understand or realize that their needs have been met or not ("Basics of Dementia Care", n.d.). Caregivers and staff members may be needed to help to aid the patient in understanding if their needs have been met or not. If their need is not met, it could lead to

feelings of fear, paranoia or BPSDs as they may not be able to express their feelings (Douglas, et al., 2014 & “Basics of Dementia Care”, n.d.). Low stress management stems from an inability to cope with external stimuli (Sung, Lee, Li & Watson, 2012). If the need remains unmet, it will become a deprivation, which could lead to the individual not being able to continue on the path of Maslow’s hierarchy of needs and feel a sense of belonging, love, and self-esteem leading to self-actualization (McLeod, 2007). In order for the patient to continue on Maslow’s hierarchy of need, families, staff or caregivers may need to re-orientate the client if able to continue support them and their adjustment. Research that has been done exploring unmet needs of both patients and caregivers has shown that the most unmet need is unmet information, support, companionship and symptom relief for dementia (Scholxel- Dorenbos, Meeuwsen & Rikkert, 2010).

**Self-Actualization.** The most important need is located at the top of Maslow’s hierarchy of need, this being self-actualization ( Doerr, 2015; Scholxel- Dorenbos, Meeuwsen & Rikkert, 2010). Self- actualization involves finding a sense of meaning and purpose in the life, independence and spirituality. As the pyramid decreases, more basic and immediate needs are found. Those experiencing a form of cognitive impairment may struggle with coping strategies making their ability to continue climbing the ladder towards self-actualization much harder. Some methods of achieving this include helping those diagnosed with a form of dementia to feel a sense of community and belonging (Dementia Partnership, n.d.). Through the help of caregivers, they are able to have their basic needs met. Caregivers are able to help the patient by preparing meals, asking open ended questions, and helping them to feel a sense of safety in a mindset that may make them feel unsafe (Dementia Partnership, n.d; Scholxel- Dorenbos, Meeuwsen & Rikkert, 2010). Proper communication needs to be used in order to prevent

messages to be sent that are expressing feelings of humiliation, fear and anger (Dementia Partnership, n.d.). Communication needs to be upbeat, friendly and supportive. The family members or caregiver can help to plan for the future and the best interventions to use as their disease progresses (Doerr, 2015). The caregivers can also use tools such as validation therapy to help re-orientate or reminisce to their loved ones that they are safe and protected in the environment that they are in (Heerema, 2017).

In order to continue on Maslow's hierarchy of needs, the individual needs to continue and reach the different type of needs such as leading to self-actualization (Heerema, 2017). Before self-actualization is achieved, esteem is one of the final stages in Maslow's hierarchy of needs. Continuing on the ladder would be considered growth and validation in accomplishing something meaningful in their life. For those diagnosed with a form of cognitive impairment, the stigma of the disease can hinder their growth (Doerr, 2015). "Growth needs do not stem from a lack of something, but rather from a desire to grow as a person (para. 8) (McLeod, 2007)." Growth is what people desire in their lifetime and towards old age or the end of their lives, they wonder if they have done enough in their lifetime.

Maslow's hierarchy of needs centers on fulfilling each stage and continuing onto another stage in order to achieve self-actualization (McLeod, 2007). Those with cognitive impairment may not be able to feel contentment in their self-worth or feel that their modified independence is a setback. It is important for family members and social workers to be involved in order to help the patient learn coping strategies to help achieve growth and improve their quality of life



## **Methods**

### **Purpose of the Study**

What are the social worker's view on the types of BPSDs interventions used and their effectiveness in those with dementia? This study will consist of qualitative research methodology. The information provided will analyze the social worker's viewpoint on benefits of non-pharmacological interventions to see what type of interventions are used in the treatment of BPSDs. Social workers were selected using purposive sampling.

The goal of this study was to explore different interventions used with those who are diagnosed with any form of dementia or cognitive impairment and what is beneficial to the population that they serve. The effects will be apparent in decreasing behavioral symptoms of dementia or (BPSD) such as anxiety, aggression or agitation. The decrease of behaviors will be apparent when the intervention was used as the treatment option.

### **Sampling Procedure and Rationale**

Social workers in Minnesota were selected as the population sampled due to their role in the nursing home. In the nursing home, a social worker's role is to work with residents and their families to advocate, educate, and to provide a listening ear and resource materials including community resources. The role of the social worker is to advocate for the resident as they may or may not be able to speak for themselves. Social workers are the voice for those living in the nursing home. Research has shown that personal preference has an impact on effectiveness of treatment as one small decision can have a big impact (Feltoe & Orellana, 2013). Decisions on treatment options including both pharmacological and non-pharmacological can be more beneficial depending on how that patient reacts to it and as social workers, they need to make

sure the preferences of the resident are considered. Past hobbies or experiences of the resident can have an impact on what treatment options are more beneficial.

### **Recruitment process**

Purposive sampling was used as the sampling method in this study. The contact information for those who were sampled was retrieved via online web searches. The contact information was found by calling nursing homes via phone and communication between the researcher and the social worker. If interested in the study, the email address was provided by the social worker contacted and additional information was sent to them.

Those who received the survey received documents attached via email on informed consent and the eight questions that were asked. Provided in the email was some background information on the study outlined. There were 25 emails sent off to nursing home social workers with information about this study. There were 5 surveys that were returned completed.

### **Protection of Human Subjects**

This study was approved by the University of St. Thomas Institutional Review Board (IRB). The risk of harm for the participants in this study could have been possible psychological or emotional distress. Staff members who work in this field may have had past personal or professional experience with those who have a diagnosis of dementia. Participants in this study, by answering the questions, it could have led to emotional distress by reliving past memories or emotions. The questions were selected to decrease the impact of emotional distress by allowing the social worker time to share as much or as little information as they were comfortable sharing.

### **Confidentiality**

The participants who consented to be involved in this study did remain anonymous. Every effort was made to secure confidentiality and protect the information that was disclosed.

The survey participants were not asked to identify themselves in order to participate. The identity of the social workers were kept in a word document that is on a secured laptop that was password protected. In order to inform the participants of the measures that were used to maintain confidentiality, this information was addressed in the informed consent documentation.

Informed consent was in a separate document attached to the email that was sent to those selected using purposive sampling. The email that was sent did include a word document with the questions asked and background information regarding this study. If any confidential information was disclosed, it was de-identified to ensure confidentiality. Confidential information did include names of residents or any information that was able to identify them specifically. All the information collected from the participants will be destroyed after this project is completed by July of 2018.

### **Data Collection**

Information for this study was retrieved via email. The participants did have the option to answer the questions via phone interview, but none of them chose this option.

The survey consisted of eight questions total, seven of them asking about the social worker's view of non-pharmacological and pharmacological interventions. See appendix A for a complete list of the questions asked. The eighth and last question was one that asked about demographic information. Many of the questions asked were open ended. A question asked was directed towards what the social worker saw as beneficial interventions for those who have dementia (*e.g. Do you see some non-pharmacological interventions as more beneficial than others?*). Another question asked about what type of interventions are used at the facility in which they are employed (*e.g. Of the type of interventions listed above, what are used at your facility?*). Information was provided on five types of interventions with a brief explanation.

These interventions included animal, music interventions, validation therapy, and cognitive and sensory stimulation. Gathering information on different types of interventions used was important; information was also gathered on the type of BPDS seen at these nursing homes (*e.g. What are the most common behavioral symptoms of dementia (BPSD) that you see affecting those at the nursing home?*). Lastly, there was a demographic question to gather information of the working environment/ background of the participants (*e.g. what type of facility are you working in, how long have you been working in this type of setting?*)

### **Data Analysis plan**

The data gathered will be analyzed looking for common differences and similarities. The open-ended questions were coded looking for similarities in the data that will be gathered. The transcripts provided were read and compared to one another. The answers that were given for each question were analyzed for strong similarities and differences in the social worker's view of benefits of pharmacological and non-pharmacological interventions. The information that was different and only stated by a few of the responses, not all five, were ones that stood out. All relevant information was included in the results section.

### **Results**

A total of five surveys were returned and evaluated for similarities and differences in their responses. Analysis of the material that was coded looking for keywords and phrases in their responses. Those who participated in the study showed a wide range of experiences. The questions asked to the social workers are listed and numbered below. The demographic questions are listed in the beginning to display background information on the audience of the participants.

**Please explain what type of facility you work at and how long you have been a social worker at this facility.**

Those who participated in the study, five participants, had experience that ranged from 9 months to 30 years. Three of them specified that they work in both long-term and short-term care. All of these social workers work in Minnesota at nursing homes in southern Minnesota. The participants of this study were sampled to look at their perspective on non-pharmacological and pharmacological interventions. Overall the responses that were gathered, many of those who had more years of experience wrote more detailed answers.

**1. Of the type of interventions listed above, what are used at your facility? How often are they used? Please explain.**

The first question in the study asked, about the non-pharmacological interventions and their use at the facility in which the social workers are employed. There were five examples given of interventions with the description. These interventions included: Animal Intervention, Music Intervention, Validation Therapy, Cognitive Stimulation and Sensory Stimulation. There were similarities in four of the answers that were gathered as they stated that all of these interventions were used at their facilities. The social workers stated that the non-pharmacological intervention used depended on the resident and their preferences. Those four responses stated that the intervention used was individualized and recorded in their care plan if found to be beneficial. The fifth response was different in stating that only animal assisted therapy was used at their facility. This was the only response that differed from the other four responses in stating the non-pharmacological treatment options used at skilled nursing facilities in Minnesota.

**2. Do you see some non-pharmacological interventions as more beneficial than others? If so, please explain?**

This question explored if the social worker viewed non-pharmacological interventions being more beneficial than other interventions. The responses that were gathered reported that each situation is different and advocated for person-centered care. Participant three reported: “It is very individualized. What works for one may not work for another.” An example given included having a doll to hold. In this question, when asked if they feel non-pharmacological interventions were seen as more beneficial than other interventions, each reply was different, but with a common theme of the treatment being beneficial depending on the individual’s need and their disease. Participant four stated, “No one size fits all.”

**3. Do you feel pharmacological interventions are used more often than non-pharmacological? Why do you feel this is the case? Do you think they are more beneficial than non-pharmacological interventions? Please explain.**

All five of the responses gathered stated “no,” in response to pharmacological intervention being used more often. The responses gathered stated that non-pharmacological interventions are used along with pharmacological interventions. They do not feel that pharmacological interventions are used more often than non-pharmacological interventions. One of the five responses stated that at the facility in which they are employed, they try not to use any pharmacological interventions. This participant, participant one stated “it has been out culture not to use pharmacological if at all possible.”

**4. What are the most common behavioral symptoms of dementia (BPSD) that you see affecting those at the nursing home? Examples include: agitation, wandering, delusions, hallucinations or trouble sleeping.**

All of the symptoms listed above as “examples” were stated by the social workers as individual responses to this question. One participant stated that all of the examples given were as being BPSDs that were seen in the nursing home. Other common BPSDs, that were not mentioned in the example, but reported by the social workers, were as follows: attention seeking, depression, calling out, physical aggression, insomnia and resisting care. The only common symptom was wandering and agitation. Wandering was mentioned four out of the five responses. Participant three stated “ If the delusion and hallucinations are not harmful or upsetting, sometimes we just use the ‘so what’ approach and meet the person where they are in their journey.” It was mentioned that some BPSDs are repetitive and some are disruptive towards others. Participant one stated that worry and the inability to use the phone is another BPSD. These types of symptoms can be limiting.

**5. Who do you see as making the primary decision regarding what interventions are used to treat BPSDs? What facility staff? Is family involved in the decision making process?**

Who was involved in the decision-making process was the next question that was asked in the survey. The responses that were gathered, four of the five social workers stated that the interdisciplinary team (IDT) makes the decisions. The IDT includes the following staff members: nursing, physicians, social workers, activity staff and the administrator. Not only did the four responses state that the IDT staff is involved, but they also stated that family is involved as well. These responses stated that families are involved if willing and are updated with changes made at care conferences. One response stated that nursing staff, family and the physician make the decision themselves. The social worker was not listed as being involved in the decision-making process. This response was different than the other responses due to the lesser number of people involved.

**6. Are there any barriers that inhibit the use of non-pharmacological interventions? Do you see any barriers for the use of pharmacological interventions?**

In response to this question, it was reported that barriers to non-pharmacological interventions were lack of education for staff or families, financial constraints and possible allergies to pets. The barriers to pharmacological interventions included family preferences, or a fall risk. Three of the responses stated that they felt state regulations are clear and provide barriers for pharmacological treatment in the nursing home. State regulations restrict the use of antipsychotic and psychotropic medications. Two of the responses stated that they do not see barriers to either pharmacological or non-pharmacological interventions.

**7. In your opinion, what are the most beneficial interventions to decrease BPSDs and why?**

The participants stated that validation therapy, redirecting, person centered care, animal interventions, and one-on-one interventions were seen as being the most beneficial. Person centered-care was reported three times throughout this study as a non-pharmacological intervention. This intervention was seen as being the most beneficial.

### **Discussion**

Throughout this paper, it explored the perspective of social worker's view on the types of BPSDs and interventions used on those diagnosed with dementia. The effects of different type of intervention such as pharmacological and non-pharmacological were apparent in the information that was provided by the social work participants in this study.

### **Contributions**

**Person-Centered Care.** A common statement that was made in response to several of the questions was person-centered care. When asked about what non-pharmacological interventions was more beneficial, the response was person-centered care. The understanding of



person-centered care is a culture in the nursing home to meet the needs of the resident through incorporating their past experiences in life to care that is done by staff at a nursing home (Manthorpe & Samsi, 2016). Person-centered care was stated in both question one and question two as being used as non-pharmacological intervention. The social workers stated that it depended on the resident's need and what some of their past hobbies and experiences were as to what intervention would be beneficial. In the literature, person-centered care was not talked about as non-pharmacological interventions, rather a culture of care to those serving the population. Person-centered care is a term used to describe approaches used to help those vocalize their choices about their care (Manthrope & Samsi, 2016). Nursing home staff such as, those who provide care, have been criticized for not meeting the individual needs of the residents, leading to social workers being sought out by families to help advocate and advise (Gould, 2013; Manthrope & Samsi, 2016). This study was able to demonstrate person-centered care in a new way as a non-pharmacological intervention.

**Administration of Interventions.** A common statement in response to this question was identifying those who administer the non-pharmacological intervention. The participants reported that animal interventions were administered by facility or family and two participants reported this. Two of the participants reported that music therapy is provided in activities department scheduling music activities. Two participants reported that hospice staff provides non-pharmacological interventions. One participant reported that volunteers and the staff from the Veterans Association help with providing non-pharmacological interventions. Not a lot of information was provided on who administered validation therapy, cognitive stimulation or sensory stimulation. One participant reported that the social worker is responsible for validation therapy.

**State Regulations.** State regulations in the nursing home are heavily regulated. In 2015, the nursing home regulations were “overhauled,” and this had not been done yet since 1991 (Leading Age, n/d). In this study, social workers were able to see some of its impact on non-pharmacological and pharmacological interventions. Of the five participants in this study, three of the five of them mentioned federal regulations as being a positive intervention in monitoring the use of certain medications. Participant one stated, “The nursing home regulations do a good job with monitoring anti-psychotic and psychotropic medications. The state is on our side.” This was in response to the question asked about barriers to pharmacological interventions. Since the regulations are more recent changes, the impact that they were had in this study, were ones that were not expected. Leading Age (n.d.) reported that in the new regulation psychotropic drugs need to be limited to 48 hours unless specified differently by primary care after a review has been completed and rationale documented as they affect brain activities affecting mental health and behavior (Leading Age n, d). The comment made about the state being “on our side,” was one that was very informative as to the goal of the social workers. The social worker’s role is to advocate for the best of the residents, which includes advocating for interventions for BPSDs. Every social worker has a unique practice, but the trend is showing continued education and advocacy on safety of medication and person-centered care is needed in the future.

### **Strengths and Limitations**

#### **Strengths**

One of the strengths of this study was professional contacts were able to forward this information onto some of their contacts. This was a recruitment method that was approved by the IRB and was beneficial in this study. Those who did participate in this study showed positive encouragement and curiosity. Three participants requested additional information and requested

to see the final paper once it has been completed. Positive feedback from participants and professional contacts show that this is a growing trend and topic of discussion. More information is being sought after on this topic and this study is able to possibly answer some questions that are being asked about non-pharmacological and pharmacological interventions through the social work lens.

### **Limitations**

**Participation.** After reviewing the answers to these questions, one of the limitations of this study was not being able to follow-up on the response that was given. There were times the information given at times did not answer the question fully or further clarification may have been beneficial, but was not able to be gathered. This could not be done due to response gathered via email, rather than via the phone. Response via email was not asked follow-up questions due to the parameters of the study as stated in the IRB application. Another limitation of this study regarding population was the number of participants in this study made for less information to be reviewed. Information was able to be analyzed but having additional information would make for a stronger study. Some participants had briefer response than others.

**Recruitment Process.** The recruitment process that was used for this study was a limitation for this study. One contact method used to contact social workers was limiting as it relied on the times of social workers being able to communicate on the phone. Some social workers could not be requested to participate in the study, as contact could not be made. An example of this included social workers not answering their phone and no voicemails able to be left. Contact information such as email addresses were not able to be found for social workers on the websites of nursing homes. This was another limitation to the recruitment process.

### **Implications**

**Practice.** Social workers continuing to have an interest in this topic throughout the nursing home setting will have an impact in their practice and the practice of non-pharmacological and pharmacological interventions in those diagnosed with dementia. Social Workers have shown their interest in this topic through their response and participation in this study. Understanding that even though someone is diagnosed with dementia, it does not define them and different methods of interventions can still be beneficial. Social workers need to work with interdisciplinary team members such as physicians, nursing staff, activities staff and therapists to advocate for person centered care both as a culture and an intervention for BPSDs.

**Research.** Continued research needs to be done, as it is needed to provide information to researchers, facility staff and families. This topic is a growing trend in the nursing home, so discussion about this topic is one that will hopefully continue to be explored. This study being able to show the culture of person centered care in a new light was a strength of this study and an area for continued research to be completed.

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## Appendix

### Appendix A

#### Social Worker Questionnaire

The purpose of this study is to evaluate through the social workers' perspectives on whether nursing home residents' behavioral symptoms of dementia decrease in response to the use of non-pharmacological and pharmacological interventions.

Definition of the following terms:

Animal Interventions refers to any use of animals at Skilled Nursing Facility (SNF) This includes family pets visiting one-on-one with residents, group meetings with animals being used or any other circumstance in which residents interact with animals.

Music Interventions refers to any use of music at SNF. This includes music programs during an activity, music for individual use being played in their room, and singing groups.

Validation Therapy is defined as advocating and affirming the patient's feelings.

Cognitive Stimulation is memory recall tests, face-name recognition, trivia or any other type of stimulation that is used to boost the residents' cognition.

Sensory Stimulation includes therapeutic touch, light therapy using a “happy light” or sound using soothing sounds such as a sound machine.

1. Of the type of interventions listed above, what are used at your facility? How often are they used? Please explain.
2. Do you see some non-pharmacological interventions as more beneficial than others? If so, please explain?
3. Do you feel pharmacological interventions are used more often than non-pharmacological? Why do you feel this is the case? Do you think they are more beneficial than non-pharmacological interventions? Please explain.
4. What are the most common behavioral symptoms of dementia (BPSD) that you see affecting those at the nursing home? Examples include: agitation, wandering, delusions, hallucinations or trouble sleeping.
5. Who do you see as making the primary decision regarding what interventions are used to treat BPSDs? What facility staff? Is family involved in the decision making process?
6. Are there any barriers that inhibit the use of non-pharmacological interventions? Do you see any barriers for the use of pharmacological interventions?
7. In your opinion, what are the most beneficial interventions to decrease BPSDs and why?
8. Please explain what type of facility you work at and how long you have been a social worker at this facility.

## Appendix B

### Informed Consent



#### **[1149219-1] Exploring Non-Pharmacological Interventions for Behavioral Symptoms of Dementia: A Social Work Perspective**

The purpose of this study is to evaluate social workers' perspectives on whether nursing home resident's behavioral symptoms of dementia decrease in response to the use of non-pharmacological and pharmacological interventions. You were selected as a possible participant because you work as a social worker at a nursing home.

This study is being conducted by: Ashley Schoonover, a graduate student at The University of St. Thomas and Dr. Courtney Wells a faculty member at The University of St. Thomas. The Institutional Review Board at the University of St. Thomas approved this study.

If you agree to participate, I will ask you to answer several interview questions focused on your experience of non-pharmacological treatments for dementia patient. Responding to the questions should take less than 15 minutes to complete.

This study does have the potential risk of emotional distress. Emotional trauma may be prevalent if information being disclosed brings back difficult memories both professionally or personally.

There will be no audio or video recording of the interview conducted if chosen to participate via the phone or via email. All information provided will not make you identifiable to those reading the final research paper. The information provided in writing will be kept on a secure password protected laptop. The results of the interview will be destroyed on June 2018 following the completion of this study. There are no direct benefits for participating in the study.

Participation in this study is completely voluntary. If you so chose to be a participant, by answering the questions asked, you are consenting for the information you provide to be used in this study. This study along with the questions asked, have been approved by the IRB at the University of St. Thomas.

Your participation in this study is entirely voluntary. Your decision whether or not to participate will not affect your current or future relations with the University of St. Thomas. If you decide to participate, you are free to withdraw at any time up to and until April 20<sup>th</sup>, 2018. You may withdraw by contacting the researcher, Ashley Schoonover via email or phone. You are also free to skip any questions that you do not feel comfortable answering.

You may ask any questions you have now and any time during or after the interview is complete by contacting the researcher. You may contact me at: [Scho7594@stthomas.edu](mailto:Scho7594@stthomas.edu) or my cell phone number at 507-402-5700 or my instructor Courtney Wells at 651-373-6651. You may also contact the University of St. Thomas Institutional Review Board at (651) 962-6035 or [muen0526@stthomas.edu](mailto:muen0526@stthomas.edu) with any questions or concerns.

**Please print this form to keep for your records.**