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The Benefits of Non-Pharmacological Interventions for Individuals with Dementia: A Systematic Review

by

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MSW Clinical Research Paper

Presented to the Faculty of the
School of Social Work Program
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Masters of Social Work

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Lori La Bey, Founder of Alzheimer's Speaks

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 three-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, implement the project, and publicly present the findings of the study. This project is neither a Master's thesis nor a dissertation.

Abstract

Individuals with dementia experience many symptoms as the illness progress. Some of the common symptoms of dementia are memory loss, depression, anxiety, agitation, and aggression. Non-pharmacological interventions can help alleviate the common symptoms of dementia. Some of these interventions include therapies, relaxation techniques, and creative activities. This systematic review was designed to explore the research question: What are the benefits for non-pharmacological interventions for individuals with dementia? The systematic review used peer-reviewed articles that were published in the last eight years. The databases that were used in the review were PsychINFO, PubMed, and the search terms that were used were Alzheimer's disease, non-pharmacological treatment options, non-pharmacological, nonpharmacological, Alzheimer's disease & music therapy, Alzheimer's disease & Art Therapy, Dementia, and Therapies, benefits of music therapy. Out of the articles that were found, 14 articles satisfied the inclusion criteria and were used in the final review. There were three themes found in the research articles for the study; 1) therapies, 2) relaxation technique, and 3) creative activities. The research found that there were several benefits for the use of non-pharmacological interventions for individuals with dementia.

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The research topic for this paper is the benefits of non-pharmacological interventions for individuals with dementia. The definition of non-pharmacological is any intervention intended to improve health or well-being that does not involve the use of any drugs or medicine (Laurence, 2010). Medical staff and social workers often have a lack of education about the benefits of non-pharmacological interventions for individuals with dementia and there is limited research about the benefits of the use of non-pharmacological interventions for individuals with dementia. The researcher will use the abbreviation PWD when talking about people living with dementia.

The scope of the problem is huge. The number of individuals being diagnosed with dementia is increasing every day. Since the 1980's, the number of older adults being diagnosed with dementia has more than doubled, with approximately 4.5 million cases reported in the United States (Tompkins & Bell, 2009). Older adults are defined as anyone that is 65 years or older. The problems impact many older adults around the world with many being diagnosed every day. 46.8 million people worldwide are living with dementia in 2015 (Alzheimer's Disease International, 2015). The number is expected to double every 20 years (Alzheimer's Disease International, 2015). The issues are serious with so many older adults lives being impacted and changes occurring in their lives without their control. The issues are important topics to research since the older adult population is the fastest growing population and dementia being a common diagnosis among the older adult population. With the population growing, there will be an increased number of older adults that will be diagnosed with dementia who would benefit from working with a social worker to get the services/resources that they need in place.

Medical staff and Social Workers will need more education about dementia disease and about the non-pharmacological interventions that could benefit their patients who have dementia. The purpose of this education will positively impact how social workers are able to better serve older adults with dementia. The project review will contribute to the knowledge in the social work field because many social workers don't understand the direct impacts of dementia. With increased education about dementia and the awareness of the benefits of non-pharmacological interventions, social workers will be able to better serve their patients with dementia and their families.

Background

An estimated 40 million people, mostly older than 60 years old, have Dementia worldwide, and this figure is projected to double every 20 years, until at least 2050 (Scheltens et al., 2016). Alzheimer's disease is one type of dementia. The ten warning signs of Alzheimer's disease are memory loss that disrupts daily life, challenges in planning or solving problems, difficulty completing familiar tasks at home, work, or at leisure, confusion with time or place, trouble understanding visual images and spatial relationships, new problems with words in speaking or writing, misplacing things and losing the ability to replace steps, decreased or poor judgment, withdrawal from work or social activities, and changes in mood & personality (Alzheimer's Association, 2016). Cohen-Mansfield et al. (2011) stated that the above symptoms are found in eighty percent of individuals with Alzheimer's disease. Depression is more common in people with mild dementia. Delusions occur more frequently in those with moderate dementia, and aberrant motor behavior has a high prevalence in those with severe dementia (Overshott, et al., 2004). Patients with dementia could benefit from the ongoing use of non-

pharmacological interventions to help with the common symptoms of their disease as their world is changing around them.

The History of Alzheimer's Disease

Alzheimer's disease was first described in 1906 by German physician Alois Alzheimer. Alzheimer linked symptoms to microscopic brain change. He described the haunting case of Auguste D., a patient who had profound memory loss, unfounded suspicions about her family, and other worsening psychological changes (Alzheimer's Association Research Center, 2016). In 1910, Alzheimer's disease was named after Alois Alzheimer. Dr. Alzheimer's died in 1915, not realizing that his research would have such a huge impact on the lives of millions. He wanted to understand the neurodegenerative disorders by establishing a close relationship with his patients to determine how their symptoms related to physical brain changes (Alzheimer's Association, 2016).

Some Types of Dementia

There are many different types of dementia and everyone that is diagnosed with dementia is affected differently. There is not one way that an individual that has dementia will be affected and what to expect when an individual is diagnosed.

Alzheimer's Disease

Alzheimer's disease is a progressive disease that destroys memory and other important mental functions (Mayo Clinic, 2016). The symptoms of Alzheimer's disease are memory loss, difficulty concentrating and thinking, making judgments and decisions, planning and performing familiar tasks, and changes in personality and behavior (Mayo Clinic, 2016). Some of the common feelings that older adults with Dementia experience

are agitation, depression, physical or verbal aggression, resisting care, screaming or repetitive vocalizations, wandering or pacing, restlessness, delusions, and hallucinations.

Vascular Dementia

Vascular dementia is when part of the brain doesn't get enough blood carrying the oxygen and nutrients it needs (WebMD, 2016). The symptoms of vascular dementia are problems with short-term memory, wandering or getting lost in familiar surroundings, laughing or crying at inappropriate times, trouble concentrating, planning, or following through on activities, trouble managing money, inability to follow instructions, loss of bladder or bowel control, and hallucinations or delusions (WebMD, 2016).

Lewy Body Dementia

People with Lewy body dementia first have a decline in cognitive skills and over time they have issues with movement (National Institute of Health, 2013). The symptoms of lewy body dementia are memory loss, poor judgment, confusion, difficulty with movement and posture, a shuffling walk, nightmares, and changes in alertness and attention (National Institute of Health, 2013).

Parkinson's

Parkinson's is a neurodegenerative brain disorder. A person's brain slowly stops producing a neurotransmitter called dopamine (Parkinson's Foundation, 2106). With less and less dopamine, an individual has less and less ability to regulate their movements, body, and their emotions (National Parkinson's Foundation, 2016). The common symptoms of Parkinson's are slowness of movement, involuntary shaking or tremor at

rest, stiffness of the arms, legs or trunk, trouble with balance and falls (National Parkinson's Foundation, 2016).

Frontotemporal Dementia

Frontotemporal dementia is a disease process that results in progressive damage to the temporal and/or frontal lobes of the brain (The Association for Frontotemporal Degeneration, 2016). The symptoms of frontotemporal dementia are aggression, apathy or unwillingness to talk, change in personality and mood, such as depression, lack of inhibition or lack of social tact, and obsessive or repetitive behavior (UCSF Medical Center, 2016).

The Progression of Dementia

Over time the disease worsens. In the early stages of dementia, memory loss is mild, but with the later stages of dementia, individuals lose the ability to carry on a conversation or respond to their environment (Alzheimer's Association, 2016). Raetz (2013) stated "that in early dementia, sociability is affected, but patients may repeat questions, misplace items, use poor judgment, and begin to have difficulty with more complex daily tasks like finances and driving". In the intermediate dementia, basic activities of daily living become impaired and normal social and environmental cues may not register (Raetz, 2013). In late dementia, patients become entirely dependent on others; they may lose the ability to speak, walk, and eventually eat. Long and short-term memory is lost (Raetz, 2013). Eventually all decisions have to be made about how to care for individuals with dementia, which is often up to their families and friends. It is best for the patients and their families to have discussions about who will take care of them when they are unable to take care of themselves, discussions about who will control their

finances, and make their medical decisions. It is important to have a discussion about having legal documents completed while the individual with dementia is still able to make their own decisions such as have a Power of Attorney and a Health Care Directive. Tough choices need to be made to make the person as comfortable as possible while their world around them is changing every day.

Some of the Different Non-Pharmacological Interventions

There are many different non-pharmacological interventions available for older adults that have dementia. Non-pharmacological interventions manage pain, reduce stress, encourage positive changes in mood, reduce in depression, and increase awareness of self and environment (Blackburn et al., 2014). Some of the different types of non-pharmacological interventions are support groups, family support, and music therapy.

Support Groups

Support groups are common in the early stage of dementia because the individuals are able to be there and support each other, while their cognitive function is still there. Non-pharmacological therapy can slow the disease progression (Graessel et al., 2011).

Family and Friend Support

Family support is important for individuals that have been diagnosed with dementia and especially as the disease progresses. Relationships with friends and family are necessary and beneficial (Fontaine & Oyeboode, 2014). People with dementia demonstrate continued emotional awareness and awareness of the impact of dementia upon the family members and friends involved in their lives (Fontaine & Oyeboode, 2014).

Music Therapy

Music therapy can help change patients with dementia mood especially on rough days, as the disease progresses. Music therapy has shown to increase positive social behaviors and has a significant decrease in negative behaviors related to agitation (Ziv et al., 2007). Ziv et al. (2007) found that music enhances positive functioning in patients with dementia and reduces negative behaviors that are typical of their condition. Music therapy enables those with dementia to re-enter the social world, to be responsive to others, to participate, to converse, and it provides a means to restore their status as socially recognizable actors (Matthews, 2015).

The Current Problems

The problems being considered are lack of education for the medical staff and social workers about the benefits of non-pharmacological interventions for individuals with dementia and also the lack of research. Many older adults are being diagnosed with dementia disease every day. As many as 5 million Americans age 65 and older have Alzheimer's disease, and that number is expected to double for every 5-year interval beyond age 65 (National Institute of Health, 2013). The problems are affecting everyone because there is a lack of education about what dementia is and the different interventions that could help individuals that have been diagnosed with dementia.

The Importance of the Research

These problems are important because so many social workers will work with families and clients that have been diagnosed with dementia. Additional research will educate the medical staff and social workers about the different non-pharmacological interventions available for patients with dementia and the benefits of non-

pharmacological interventions for their patients with dementia. Then the medical staff and the social workers will be able to better serve older adults with dementia knowing more about the disease and the different non-pharmacological interventions.

It is important for social workers and medical staff to be able to provide their clients different non-pharmacological interventions. Eventually older adults with dementia will require help with all tasks of daily living from their families or 24-hour care in a care facility. As an older adult's life is changing there are many non-pharmacological interventions for them to be able to be as comfortable as possible as their world is changing around them.

There is research that has been conducted on the benefits of non-pharmacological interventions for individuals with dementia. This proposed systematic review would be helpful because the researcher could look at past research to see how non-pharmacological interventions could benefit their patients who have been diagnosed with dementia and share the findings with others. Social workers could benefit from knowing about what dementia is and about the non-pharmacological interventions for older adults with dementia, and about the non-pharmacological interventions that could benefit their clients with dementia.

Methods

Research Purpose

The purpose of this systematic literature review is to explore the research question: What are the benefits of non-pharmacological interventions for individuals with dementia?

For the purpose of this study, Alzheimer's disease was defined as the most common form of dementia, a general term for memory loss and other intellectual abilities that are serious enough to interfere with daily living (Alzheimer's Association, 2016). Alzheimer's disease was referred to as memory loss that includes forgetting important information, asking the same information over and over again, challenges in planning and solving problems such as keeping track of their monthly bills, difficulty completing familiar tasks at their home such as driving to their doctors' appointments, confusion with the time or the place, trouble with their vision, problem with words for speaking and writing, misplacing things and losing the ability to retrace their steps, poor judgment, withdrawing from activities they love, and changes in their mood or personality (Alzheimer's Association, 2016). Early onset Alzheimer's was not included in the study because the study focused on older adults. The systematic review found out about the benefits of non-pharmacological interventions for individuals with various types dementia.

Inclusion Criteria

The topic for the research must be about the benefits of non-pharmacological interventions for individuals with dementia. The types of literature for the study are peer reviewed articles and empirical articles. The time frame for the research is that the articles have to have been published in the last 8 years because older adults that are being diagnosed with dementia in the last 8 years. The types of studies used for the research are pilot studies, exploratory studies, qualitative studies, quantitative studies, case studies, and focus studies. The sample is older adults that have been diagnosed with dementia.

Search Strategy

The review considered peer-reviewed and full text articles for the purpose for this research. In the preliminary search of academic journals and online search sites included PsychINFO and PubMed were found to address the questions of the benefits of non-pharmacological interventions for individuals with dementia. The search terms used are Alzheimer's disease, non-pharmacological treatment options, non-pharmacological, nonpharmacological, Alzheimer's disease & music therapy, Alzheimer's disease & art therapy, dementia, and therapies, benefits of music therapy. The limiters that the research used to conduct the search are to only focus on the non-pharmacological treatment options for individuals with Dementia. The types of non-pharmacological treatment options the researcher focused on are music therapy, aromatherapy, animal assisted therapy, art activities, poetry, non-pharmacological interventions, mediation, and group therapy.

After the articles were found, the researcher reviewed the abstract first to see if the article should be kept or thrown out. The researcher tracked how many articles were found by making a list of how many articles were found. The number of articles that were found was 56 articles. The number of articles that were rejected was 42 because they did not meet the inclusion criteria. The articles were rejected for a couple of reasons such as only available in other languages, the articles were systematic reviews of past research, and there were a few duplicate articles. The numbers of articles that will be kept that meet the inclusion criteria were 14.

Data Analysis

After the articles were selected for the research; the researcher read the abstracts, the findings, and discussions of the articles to decide if the articles meet the required criteria. Then a chart was made with the articles that meet the required criteria. The required criteria includes the date & author, the sample size of the research & how the subjects of the study were found for the research, the findings of the study, and the non-pharmacological interventions that were used in the study. The number of articles that were used for the research is 14 articles.

Findings

The research question for this study is: What are the benefits of non-pharmacological interventions for individuals with dementia? The total number of articles that were found during the initial search was 56 articles. The number of articles that did not meet the criteria was 42. The reason that the articles were rejected was the articles were only available in other languages, the articles were systematic reviews of past research, and there were a few duplicate articles. A total of 14 relevant articles answered the research questions. The different non-pharmacological interventions for individuals with dementia that were found in the studies were music therapy, aromatherapy, animal-assisted therapy, art activities, poetry workshops, art therapy, mediation, and group therapy. The themes that were found in the research were therapies, relaxation techniques, and creative activities.

Therapies

There were many different types of therapies (See Table 1) that were found to be beneficial for individuals with dementia. Some types of therapies that were found to be

beneficial for individuals with dementia were music therapy, animal-assisted therapy, and group therapy.

Table 1. Therapies

Date & Author	Sample Size & how the subjects for the study were found	Interventions	Findings
Schall et al., 2015	9 PWD The participants were recruited using newspapers advertisements & advisory information.	Effects of individual music therapy on communication, behavior, and emotional well-being with advanced dementia. (Music)	Music therapy positively affected communication behavior, situational well-being, and expression.
Cox et al., 2014	7 residents in a dementia unit of a private residential care facility Written informed consent was given by the residents power of attorney	Investigated whether live music could facilitate the expression of positive behavior with Alzheimer's disease. (Music)	Positive behaviors such as smiling and laughing were displayed during and/or after the intervention. Functional behaviors improved such as initiating conversation, alertness to surrounding, attention focusing, reminiscent conversation, sitting still, and sleeping
Samson et al., 2014	14 PWD PWD were recruited at the care facility	The effectiveness of musical activities to other pleasant activates with severe Alzheimer's disease. (Music)	Improve emotional and behavioral functioning such as facial expression and mood.
Ray and Mittelman, 2015	132 PWD The participants were screened and recruited	The use of Music therapy for treatment of symptoms with moderate to severe dementia. (Music)	Depressive symptoms were reduced. Agitation was reduced.
Gomez and Garcia, 2015	42 patients with moderate Alzheimer's disease Patients were screened	Determine the clinical improvements with Alzheimer's disease. (Music)	Improvements in memory, orientation, depression, and anxiety. Improved cognitive, psychological, & behavioral symptoms.
Menna et al., 2015	50 PWD were selected randomly	The efficacy of animal-assisted therapy with Alzheimer's disease. (Animal-assisted therapy)	Slight improvements in mood. Slight improvement in cognitive function. Depression decreased.
Ballard et al., 2016	195 participants with dementia The study recruited people with dementia (stage 1 or greater) 8 nursing homes were selected	Impact of non-pharmacological interventions on health-related quality of life with dementia. (Social Interactions)	Social interaction improved. Reduced symptoms such as agitation and depression.
Grassel et al., 2011	98 patients with degenerative dementia. Patients were randomly selected.	The impact of long-term non-pharmacological group intervention with degenerative dementia. (Group Therapy)	Cognitive function and the ability to carry out activities of daily living had remained stable. Significant improvements in functional dependency.

Music Therapy

The research study found five articles that found the positive influences of the use of music therapy. The study evaluated the effects of music therapy on the PWD communication behavior and their well-being (Schall et al., 2015). Music therapy positively influenced the PWD communication behaviors, their well-being, and their expressions (Schall et al., 2015; Cox et al., 2014). There was a live musical violin intervention in a residential care facility to assess the PWD positive behaviors (Cox et al., 2014). There was an increase in the PWD positive behaviors before the intervention, during music therapy, and after the intervention were done (Cox et al., 2014; Ray & Mittelman, 2015). The PWD showed improvements in their participatory function and affective behaviors during the use of music therapy (Cox et al., 2014).

The use of music therapy was used to evaluate symptoms of dementia such as depressive symptoms, agitation, and wondering (Ray & Mittelman, 2015). Music therapy provided the opportunity for self-expression through verbal and nonverbal modes using music, movement, singing, and tonal therapeutic activities (Ray & Mittelman, 2015). The only difference was that the symptoms of depression were reduced two weeks posttreatment of the use of music therapy (Ray & Mittelman, 2015). Depression and agitation were reduced with the use of music therapy (Ray & Mittelman, 2015). The study compared the effectiveness of music activities to other pleasant activities with PWD (Samson et al., 2014). Their emotions and their behavioral functioning improved (Samson et al., 2014). The PWD emotions in their facial expressions and their mood improved (Samson et al., 2014). The study wanted to determine the clinical improvements of patients with Alzheimer's (Gallego & Garcia, 2015). The use of music

therapy significantly improved the PWD memory orientation and lowered their depression, and anxiety levels (Gallego & Garcia, 2015). There were improvements in the PWD cognitive, psychological, and behavioral alterations (Gallego & Garcia, 2015; Ray & Mittelman, 2015).

Animal-assisted therapy

The research study found one article that found the benefits of animal-assisted therapy for individuals with dementia. They study evaluated the effectiveness of animal assisted therapy with patients that had Alzheimer's disease (Menna et al., 2016). Slight improvements were shown in the patients with Alzheimer's disease cognition and their mood with the use of animal-assisted therapy (Menna et al., 2016). Cognitive functioning was simulated with the use of animal-assisted therapy (Menna et al., 2016). There were changes to the participant's mood and their depressive symptoms after the use of animal-assisted therapy (Menna et al., 2016).

Group Therapy

The study found 2 articles that discussed the benefits of group therapy for individuals with dementia. The intervention consisted of motor stimulation, practicing activities of daily living, and cognitive stimulation (Grassel et al., 2011). The use of group therapy helped the participant's cognitive functioning and their ability to carry out ADLs (activities of daily living) during the use of the intervention (Grassel et al., 2011). Participant's decline of their cognitive function and their ability to carry out ADLs (activities of daily living) as the disease progressed slowed with the use of group therapy (Grassel et al., 2011). The study examined the use of person-centered care with social interactions and exercise interventions (Ballard et al., 2016). Research has found that

non-pharmacological interventions benefit individuals with dementia. There was improvement in the patient's HROL (health-related quality of life in people with dementia living in care homes) (Ballard et al., 2016). Ballard et al. (2016) found that the HROL improved in their social interactions with others and their cognition.

Relaxation Techniques

The types of relaxation techniques (See table 2) that were found to benefit individuals with dementia are aromatherapy and mediation.

Table 2. Relaxation Techniques

Date & Author	Sample Size & how the subjects for the study were found	Intervention	Findings
Jimbo et al., 2009	28 PWD Random sampling: Patient's families were given detailed information about the methods & purpose of the study.	The effects of aromatherapy. (Aromatherapy)	Improved PWD ability to form abstract ideas. Some improvements in movement & conceptual understanding. Improvements in cognitive function.
Innes et al., 2012	6 PWD & their caregivers The participants were recruited using newspaper ads, flyers, and brochures placed in medical offices.	To investigate the effect of a mediation program on perceived stress, sleep, mood, and related outcomes with Alzheimer's disease. (Mediation)	Improves stress, mood, sleep, & blood pressure. Improvements in well-being, neuropsychological function over time
Innes, Selfe, Khalsa, & Kandati, 2016	60 Patients with memory loss were randomly selected	The effects of the relaxation program. (Mediation versus music listening) on perceived stress, mood, sleep, quality of life with memory loss.	Improvement in psychological well-being, mood, sleep quantity

Aromatherapy

Aromatherapy was shown to help individuals with dementia. The use of aromatherapy showed a significant improvement in personal orientation that was assessed using the GBSS-J (Japanese version of the Gottfries, Brane, Steen scale) and the TDAS (Touch Panel-type Dementia Assessment Scales) with PWD (Jimbo et al., 2010). With the use of aromatherapy there was an improvement in the patient's ability to form abstract ideas (Jimbo et al., 2010). Participant's cognitive function and some

improvement in their conceptual understanding improved with the use of aromatherapy (Jimbo et al., 2010).

Mediation

The use of mediation benefits individuals with dementia. The study wanted to look at the effects of mediation on stress, sleep, mood, and related outcomes for PWD (Innes et al., 2012). Participants showed a significant improvement in their psychological well-being, their mood, & their sleep quality after the use of medication (Inne et al., 2016; Rose & Thomposon-Heisterman, 2012). There was an improvement in the participants stress levels, their depression levels decreased, their retrospective memory function, and their blood pressure improved (Innes et al., 2012). The research studied the effects of mediation and music therapy on the PWD stress, sleep, and mood (Innes et al., 2016). There were improvements in their psychological well-being, their mood, and sleep improved (Innes et al., 2016). There improvements throughout the whole six months of the study.

Creative Activities

Creative activities (See Table 3) have showed to benefit individuals with Dementia. Some of the creative activities are art activities and poetry workshops.

Table 3. Creative Activities

Date & Author	Sample Size & how the subjects for the study were found	Interventions	Findings
Sauer et al., 2016	38 PWD were collected during a person-centered and intergenerational art activity program called Opening Minds through Art.	Person-centered versus traditional visual arts activities with dementia. (Art)	There was considerable well-being found (ex engagement, social interest, and pleasure). Stimulates the environment that enhances their well-being throughout the duration of the intervention.
Petrescu et al., 2012	4 PWD Qualitative study which used a structured interview approach	The effectiveness of writing poetry on psychological function with early stage dementia. (Poetry Writing)	Themes found in the study were self-efficacy, personal growth, wanting to contribute, and poetry writing as a way of coping with the progression of

			<p>the condition</p> <p>Enjoyed the experience</p> <p>Increased positive emotions</p> <p>Optimize engagement for PWD.</p> <p>Enhance quality of life and that positive psychology that emphasizes strengths rather than deficits, to help understand dementia.</p>
Tucknott-Cohen & Ehresman, 2016	1 patient with late stage dementia.	The effect of art therapy with late stage dementia. (Art therapy)	Art therapy helped decrease agitation, aggression, and depression.

Art Activities

There are many benefits of the use of art activities for individuals with dementia; Open Minds through art conducted a study with PWD during a person-centered and intergenerational art activities (Sauer et al., 2016). The use of art increased the participant’s engagement in the art activities and the participants enjoyed engaging in the art activities (Sauer et al., 2016). During the art activities, the participants showed a lower intensity score on their disengagement (Sauer et al., 2016). After the use of art therapy the participants were more engaged and their pleasure intensity scores were significantly higher (Sauer et al., 2016). The study showed the healing benefits of art therapy for a PWD (Tucknott & Ehresman, 2016). Art therapy was showed to decrease agitation, aggression, and depression in individuals with dementia (Tucknott & Ehresman, 2016).

Poetry Workshop

Poetry has shown to benefit individuals with dementia. They study examined the effectiveness of writing poetry for PWD (Petrescu et al., 2012). The women that participated in the poetry workshop said, “that the workshops benefited them, but their experiences were differed greatly” (Petrescu et al., 2012). The poetry workshop increased

the women's competence, their self-efficacy, their personal growth; they want to contribute in the workshop, the use of poetry writing as way of coping with the progression of dementia (Petrescu et al., 2012).

Discussion

This systematic review was developed to explore the benefits of the use of non-pharmacological interventions for individuals with dementia. The goal of this research was to look at different types of non-pharmacological interventions and how the use of the interventions benefited individuals with different types of dementia. The review had an inclusion and exclusion criteria that it had to meet to be included in the systematic review. The types of non-pharmacological interventions that were found to be beneficial in the research study were music therapy, aromatherapy, animal-assisted therapy, art therapy, art activities, poetry workshops, art therapy, mediation, and group therapy. The findings suggest that non-pharmacological interventions can benefit individuals with dementia.

The Benefits of Non-Pharmacological Interventions Options

The research found that there were many benefits for the use of non-pharmacological treatment interventions for individuals with dementia. Communication behaviors, their well-being, and their expressions were greatly influenced with the use of music therapy. Positive behaviors increased before the use of music, during the intervention, and after the use of music. Music therapy and animal-assisted therapy improved functioning and affective behaviors for individuals with dementia. Music therapy and art activities helped elevate common symptoms of dementia such as depression and agitation. Animal-assisted therapy helped elevate symptoms of

depression for individuals with dementia. Music helped improve the patient's with dementia facial expressions such as how they were feeling. Listening to music that is familiar to them can help them reminisce about their past. Animal-assisted therapy and music therapy helped improve memory orientation and decrease anxiety. Aromatherapy helped improve the patient's with dementia ability to form abstract ideas and their cognitive functioning improved. Improvements were found in psychological well-being, mood, and sleep quality after the use of mediation as an intervention for treating symptoms of dementia. Mediation and relaxation techniques helped reduce stress levels, depression levels, memory function and decrease blood pressure. Art activities increased the participant's engagement in the activities and their enjoyment increased during the intervention. Poetry workshops helped the individual's competence to be improved, their self-efficacy, their personal growth, their excitement to be part of the poetry workshop, and writing as a way to cope with the progression of dementia.

The Use of Non-Pharmacological Interventions Not Being Beneficial

Some of the common symptoms of dementia aren't affected with the use of non-pharmacological interventions. Music therapy was not effective for reducing wandering for individuals with dementia. With the use of aromatherapy there was a slight improvement in the participant's cognitive functioning.

Implications of Research

There were a few implications in the research. The research showed that nonpharmacological interventions were beneficial and should be used more with additional studies to improve quality of life. There needs to be more talk about the use of non-pharmacological interventions that could benefit many individuals that are coping

with a progressive disease. The health care system is all about making more money and pushing medication on individuals to help slow down the progression of dementia; without realizing that medication is not effective. There needs to be more talk about using non-pharmacological interventions that are able to help individuals with dementia continues to live health and happy lives.

While there is not a treatment for dementia currently, there is not enough talk about how to cope with the everyday changes that are occurring for individuals with dementia. Mental illness is still a huge stigma in the Western cultural that dementia falls under that is not something to talk about.

Another limitation is that the topic of non-pharmacological treatment options is a newer topic that since there is limited research out there often times the health care team does not have enough supporting evidence to tell their patients about the interventions that could benefit them. Many of the studies were done around the world. While that is great to see that studies are being conducted around the world, many of the studies were not available in the language the research needed to complete this systematic review.

In western society pharmacological companies push the use of medication on individuals more often because medication has always been the number one treatment for individuals with dementia. There was a lot of research about the topic out there but many of the articles found by the research were systematic reviews that were already written by other researchers. It was hard to find the single studies written about without them being compared to the other research that has already been done.

A Policy Implication

A policy implication is that health insurances and Medicare would be able to help cover the cost of these services. Therapies, art activities, and relaxation techniques have shown many benefits for helping individuals cope with the so common types of dementia. It should be important to be able to provide these services to make our clients lives better so that they are able to better adjust to the changes that are happening around them. Often times families have to pay out of pocket to be able to get these types of interventions that help benefit their family member with dementia in several ways. These type of services are often not talked about because these are extra cost that just add up to the already high cost of taking care of a family member that has been diagnosed with a progressive disease.

Future Research and Implications

Something that emerged from the research for this systematic review was the limited research available. Most of the articles that were found were systematic reviews of all the past research. The researcher had a difficult time being able to find the individual studies written about instead of all the studies already being compared. Most of the research focused on dementia and Alzheimer's disease. There needs to be more research conducted on the benefits of non-pharmacological interventions for the different types of dementia. Each dementia affects an individual differently so it is important to be able to study how the interventions benefit a type of dementia since there are several types.

Many of the studies that were conducted were quantitative and pilot studies. It would be beneficial to be able to conduct interviews of individuals that were recently

diagnosed with dementia to hear their story. Then they could tell about their benefits of the use on non-pharmacological interventions to help cope with the changes that were happening in their lives. Interviews would only be a useful research method in the beginning of the diagnosing of the disease, since all individuals that are diagnosed with dementia aren't able to make up full sentences and have a conversation as the disease progresses. Since the disease progresses differently for each individual it is hard to know really know what stage the individual is at. As the disease progresses this is when non-verbals are so important. While the individuals might be able to communicate as well as they use to, you can tell by their non-verbals of how the non-pharmacological interventions are benefiting them.

While dementia is affecting so many individuals it is not often talked about. Many people don't fully understand what dementia is. There needs to be education about what dementia is so that the communities that we live in are able to speak up if we see an individual that might need our help. There is still that assumption that dementia is a death sentence.

Limitations

While the use of non-pharmacological interventions have shown to benefit individuals with dementia in several ways, there are still several limitations to the current research. Many of the current studies have had small numbers of participants in their studies. Research has found that there are so many benefits to use of non-pharmacological interventions for dementia that there aren't more health care teams discussing the types of non-pharmacological interventions and the benefits of the interventions.

The systematic review was limited to peer reviewed articles and had to be written in a certain time period. It is important to have peer reviewed articles that were written by other researchers that conducted research by following certain guidelines. It makes it difficult when it is hard to find each of the individual studies instead of all the studies in a systematic review together. A time period was set to have to the most recent available research out there. Then the researcher was able to see the benefit to the use of non-pharmacological interventions to discuss with her clients with dementia and their families. It is important to be educated about the many different interventions that are available to be able to better help PWD adjust to the many changes that are occurring in their lives. Articles were included with the different types of dementia such as Alzheimer's disease and the several stages of dementia. All the different non-pharmacological interventions were included in the review to open the different interventions that were able that would benefit everyone. Everyone has their dislikes and likes so it is best to keep your options open to include all the different non-pharmacological interventions for dementia.

References

- Alzheimer's Association. (2016). Alzheimer's disease & Dementia. Retrieved from: www.alz.org/alzheimer's_disease_what_is_alzheimers.asp.
- Alzheimer's Disease International. (2015). World Alzheimer's Report 2015: The Global Impact of Dementia An Analysis of Prevalence, Incidence, Cost, and Trends. Retrieved from: www.alz.co.uk/research/WorldAlzheimerReport2015.pdf.
- Acevedo, A. & Loewenstein, D. (2007). Nonpharmacological cognitive interventions in aging and dementia. *Journal of Geriatric Psychiatry and Neurology*, 20(4), 239-249, doi: 10.1177/0891988707308808.
- Ballard, C., Orreal, M., Sun, Y., Moniz-Cook, E., Stafford, J., Whitaker, R., Woods, B., Corbett, A., Banerjee, S., Testad, I., Garrod, L., Khan, Z., Woodward-Carlton, B., Wenborn, J., & Fossey, J. (2016). Impact of antipsychotic review and non-pharmacological intervention on health-related quality of life in people with dementia living in care homes: WHELD-a factorial cluster randomized controlled trial, *Geriatric Psychiatry*, 45-72, doi:10.1002/gps.4572.
- *Ballard et al. (2009). Nonpharmacological treatment of Alzheimer's disease. *Nature Reviews Neurology*, 5(5), 589-595, doi: 10.1002/gps.4572.
- Blackburn et al. (2014). Music therapy for service users with dementia: a critical review of the literature. *Journal of Psychiatric and Mental Health Nursing*, 21, 879-888. doi: 10.1111/jpm.12165.
- Buschert, V., Bokde, L. W., & Hampel, H. (2010). Cognitive intervention in Alzheimer's disease. *Nature Reviews Neurology*, 7(4), 508- 517. doi: 10.1038/nrneurol.2010.113
- Cohen-Mansfield et al. (2011). Knowledge of and attitudes toward nonpharmacological interventions for treatment of behavior symptoms associated with dementia: a comparison of physicians, psychologists, and nurse practitioners. *The Gerontologists*, 52(1), 34-45, doi: 10.1093/geront/gnr081.
- *Cox, E., Nowak, M., & Buettner, P. (2014). Live music promotes positive behaviors in people with Alzheimer's disease, *British Journal of Occupational Therapy*, 77(111), 556-562, doi: 10.4276/030802214X14151078348477.
- Fontaine, J. L. & Oyeboode, J. R. (2013). Family relationships and dementia: a synthesis of qualitative research including the person with dementia. *Aging & Society*, 34, 1243-1272. doi: 10.1017/S0144686X12000056

- *Gomez Gallego, M & Gomez Garcia, J. (2015). Music Therapy and Alzheimer's disease: Cognitive, Psychological, and behavioral effects, *Neurology*, 1-9, doi: 10.1016.j.nrl.2015.12.003.
- Gitlin et al. (2010). Targeting and managing behavioral symptoms in individuals with dementia; a randomized trial of a nonpharmacological intervention. *The American Geriatrics Society*, 58, 1465-1474. doi: 10.1111/j/1532-5415.2010.02971.
- *Graessel et al. (2011). Non-pharmacological, multicomponent group therapy in patients with degenerative dementia: a 12-month randomized, control trial. *BMC Medicine*, 9 (129), doi: 10.1186/1741-7015-9-129.
- Hungerford, C., Jones, T., & Cleary, M. (2014). Pharmacological versus non-pharmacological approaches to managing challenging behaviors for people with dementia. *British Journal of Community Nursing*, 19 (2), 72-77, doi: 10.12968/bjcn.2014.19.2.72.
- *Innes, K. E., Selfe, T. K., Khalsa, D. S., & Kandati, S. (2016). Effects of Meditation versus Music Listening on Perceived Stress, Mood, Sleep, and Quality of Life in Adults with Early Memory Loss: A Pilot Randomized Controlled Trial, *Alzheimer's Discussion*, 52(4), 1277-1298, doi: 10.3233/JAD-151106.
- *Innes, K. E., Selfe, T. K., Brown, C. J., Rose, K. M., & Thompson-Heisterman, A. (2012). The Effects of Meditation on Perceived Stress and Related Indices of Psychological Status and Sympathetic Activation in Persons with Alzheimer's disease and Their Caregivers: A Pilot Study, 1-9, doi: 10.1155/2012/927509.
- *Jimbo, D., Kimura, Y, Taniguchio, M., & Urakami, K. (2010). Effects of aromatherapy on patients with Alzheimer's disease. *Japanese Psychogeriatric Society*, 9, 173-179, doi: 10.1111/j.1479-9301.2009.00299.x.
- Khan, F. & Curtice, M. (2011). Non-pharmacological management of behavioral symptoms of dementia. *British Journal of Community Nursing*, 16(9), 441-449, Retrieved from <http://dx.doi.org/10.1155/2015/218980>
- Laurence, P. R. (2010). Evaluating non-pharmacological interventions-Project report. Retrieved from <http://www.filesdown.esecure.uk>.
- Matthews, S. (2015). Dementia and the power of music therapy. *Health and Medicine*, 29(8), doi: 10.1111/bioe.12148.
- Mayo Clinic. (2016). Alzheimer's disease. Retrieved from <http://www.mayoclinic.org/diseases-conditions/alzheimers-disease/symptoms-causes/dxc-20167103>
- *Menna, L. F., Santaniello, A., Gerardi, F., Di Maggio, A., & Milan, G. (2016). Evaluation of the efficacy of animal-assisted therapy based on the reality

- orientation therapy protocol in Alzheimer's disease patients: a pilot study, *Japanese Psychogeriatric Society*, 16, 240-246, doi: 10/1111/psyg.12145.
- National Institutes of Health. (2013). Lewy Body Dementia: Information for Patients, Families, and Professionals. Retrieved from: <https://www.nia.nih.gov/alzheimers/publication/lewy-body-dementia/introduction>
- National Institutes of Health. (2013). The Dementias: Hope through Research. Retrieved from: <https://www.nia.nih.gov/alzheimers/publication/dementias/types-dementia>
- National Parkinson Foundation. (2016). Understanding Parkinson's. Retrieved from <http://www.parkinson.org/understanding-parkinsons>
- Overshott, R. Byrne, J. & Burns, A. (2004). Nonpharmacological and pharmacological interventions for symptoms in Alzheimer's disease, *Expert Review of Neurotherapeutics*, 4(5), 809-821. doi: 10.1586/14737175.4.5.809.
- *Petrescu, I., MacFarlane, K., & Ranzijn, R. (2012). Psychological effects of poetry workshops with people with early stage dementia: An exploratory study, *Dementia*, 0(0), 1-9, doi: 10.1177/14713012124556279.
- Raetz, J. (2013). A nondrug approach to dementia. *The Journal of Family Practice*, 62(10), 548-557, Retrieved from <http://go.galegroup.com/ps/anonymou?id=GALE%7CA349606530&sid=googleScholar&v=2.1&it=r&linkaccess=fulltext&issn=00943509&p=AONE&sw=w&authCount=1&isAnonymousEntry=true>.
- *Ray, K. D & Mittelman, M. S. (2015). Music therapy: A nonpharmacological approach to the care of agitation and depressive symptoms for nursing home residents with dementia, *Dementia*, 0(0), 1-22, doi: 10.1177/1471301215613779.
- *Samson, S., Clement, S., Narme, P., Schiarartura, L., & Ehrle, N. (2014). Efficacy of musical intervention in dementia methodological requirements of nonpharmacological trails, *The Neurosciences and Music*, 249-254, doi: 10.1111/nyas.12621.
- *Sauer, P. E., Fopma-Loy, J, Kinney, J. M., & Lokon, E. (2016). "It makes me feel like myself": Person-centered versus traditional visual art activities for people with dementia, *Dementia*, 15(5), 895-912, doi: 10.1177/1471301214543958.
- *Schall, A., Haberstroh, J., & Pantel, J. (2015). Time Series Analysis of Individual Music Therapy in Dementia: Effects on Communication Behavior and Emotional Well-being. *Gero Psych*, 28(3), 115-123, doi: 10.1024/1662-9647/a000123.

- The Association for Frontotemporal Degeneration. (2016). Understanding Frontotemporal Lobe Dementia. Retrieved from <http://www.theaftd.org/understandingftd/ftd-overview>
- Tompkins, S. A. & Bell, P. A. (2009). Examination of psychoeducation intervention and a respite grant in relieving psychosocial stressors with being an Alzheimer's caregiver. *Journal of gerontological social work*, 52 (2), 89-104. doi: 10.1080/01634370802561877.
- *Tucknott-Cohen, T & Ehresman, C. (2016). Art Therapy for an Individual with Late Stage Dementia: A Clinical Case Description, *Art Therapy: Journal of the American Art Therapy Association*, 33(1), 41-45, doi: 10.1080/07421656.2016.1127710.
- Vasionyte, I. & Madison, G. (2013). Music intervention for patients with dementia: a meta-analysis. *Journal of Clinical Nursing*, 22, 1203-1216, doi: 10.1111/jocn.12166.
- WebMD. (2016). Vascular Dementia. Retrieved from <http://www.webmd.com/stroke/vascular-dementia#1>
- UCSF Medical Center. (2016). Frontotemporal Dementia Signs and Symptoms. Retrieved from http://www.ucsfhealth.org/conditions/frontotemporal/dementia/signs_and_symptoms.html
- Ziv et al, (2007). The effects of background simulative music on behavior in Alzheimer's disease, *Journal of Music Therapy*, 44(4), 329-343, doi: 10.1093/jmt/44.4.329.