Policy Recommendation Development for Increasing Staff Awareness of Music Therapy For Behavioral and Psychological Symptoms in Dementia

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A Quality Improvement Project

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In Partial Fulfillment of the Requirements for the Doctor of Nursing Practice

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November 27, 2022

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Dementia has been identified as one of the leading healthcare challenges of the 21st century, with an estimated 5.7 million Americans living with dementia. A significant comorbidity of dementia is an increase in behavioral disturbances which can reduce the quality of life of patients with dementia and their caregivers (Kester, Unutzer, Hogan, & Huang 2017). Currently., 13.8 million people are believed to have mild cognitive impairment, a precursor to dementia (Dawson, 2018). In a study based on Medicare recipients over 65 years old and picked randomly, the prevalence of dementia was 8.5 % in 2008 (Koller & Bynum, 2015). The prevalence is even higher for the eighty-five and above age group at 24.9% (Koller & Bynum, 2015). Symptoms of dementia include memory loss, a decline in thinking skills, orientation, judgment, and emotional problems. Concurrently, patients with dementia exhibit an increase in behavioral disturbance that requires antipsychotic medications and cognitive enhancers (Perng, Chang & Tzang, 2018). A study of enrollees of Humana Medicare plus aged sixty-five or older who had been enrolled for more than 180 days between November 2008 to January 2010 found that 12% of Medicare registered persons with a dementia diagnosis had received an antipsychotic drug (Kester, Unutzer, Hogan, & Huang 2017). This paper describes a proposal to develop a policy to reduce the use of medications through the use of music therapy and provides the background of the problem and evidence related to the use of music as a non-pharmacologic intervention to reduce agitation in patients with dementia (Moreno-Morales et al., 2020). A completed policy was developed and evaluated and is presented for consideration.

The Problem Identification/Available Knowledge

Music is a common therapeutic tool used to manage psychiatric disorders such as dementia (Moreno-Morales et al., 2020). Over the past few years, there has been a substantial increase in the use of music as a treatment for neuropsychiatric symptoms in dementia patients (Ibenthal et al., 2022). Numerous randomized controlled trials (RCTs) have shown that music therapy can be an efficient alternative for enhancing cognition, life quality, and mood in these persons with dementia (Dimitriou et al., 2020; Baker et al., 2022). Despite this evidence, many staff members are unaware of the efficacy of music therapy for these symptoms and may not recommend it to their patients (Holden et al., 2019). The policy proposal development proposed here will be to enhance nurses and music therapist's understanding of music as a therapeutic tool and to improve assessment options and interventions for patients with behavioral and psychological symptoms of dementia (BPSD) in the inpatient setting.

PICOT Question

The clinical question here is: *Does increasing nursing staff awareness of the use of music compared to not increasing awareness reduce the use of psychotropic medications and reduce agitation in dementia patients?* The PICOT question was developed after performing a SWOT analysis using staff utilization of music therapy compared to routine care.

The Music in Dementia Assessment Scale (MiDAS) tool, Appendix A, will be recommended to assist the nursing staff and music therapists in identifying dementia patients who show a positive response to music and who might most likely be able to benefit from a music program in managing their Behavioral and Psychological Symptoms associated with Dementia (BPSD). This will be discussed below.

MiDAS uses Visual Analogue Scales (VAS). Each VAS comprises a 100mm line without intervals. The two extremes are labeled “none at all” and “highest”. The rater scores the dementia patient on five domains: level of interest, level of response in communication/activity, levels of initiation in communication, levels of involvement/participation and levels of enjoyment. The total scores of the five VAS items (100mm-line = score 100 x five VAS items = 500) are reported as the MiDAS score. Owing to recommendations from the professional evaluators, the rating score was changed to a five- point Likert scale. The Likert score used for this policy will include: 1 Never, 2 Rarely, 3 Occasionally, 4 Frequently and 5 Always. The total score will then be multiplied by 100 to make a maximum total of 500.

To evaluate a person’s response to music, an initial score is obtained by a caregiver without exposure to music. A beginning score is obtained within the first five minutes after exposure to music by a different scorer. A third score is obtained during what is perceived to be the five most clinically significant minutes during the music therapy session and a final score is obtained hours after the music session. A declining MiDAS score over time would indicate a lack of benefit from music therapy. If a patient sleeps during the session, the scorer will skip question one to six and answer question seven only (McDermot 2018).

Literature Review, Matrix (table) Development, and Literature Synthesis

Search Process

A literature review was conducted to identify relevant literature related to the staff awareness of music's efficacy in reducing behavioral and psychological manifestations of dementia. Databases for the literature search included SOLAR, MEDLINE, PsycINFO, Embase, Google Scholar, and the Cumulative Index of Nursing and Allied Health Literature (CINAHL). Articles were identified systematically in these databases using key search terms, including

music therapy, psychotropic drugs, music, and psychotropic treatment effectiveness, and management of geriatric patients with music and psychotropic treatment. Inclusion criteria for the literature reviewed included recent articles and studies conducted within five years (between 2017 to 2022). The articles chosen were peer-reviewed and selected from vetted sources such as professional journals. All articles were assessed for their strengths and weaknesses to identify the most appropriate to support the study topic. Preference was given to articles that evaluated the quality of their interventions and used realistic samples to assess and compare the two interventions to manage dementia and episodes of agitation and behavioral change in the elderly.

Literature Synthesis

A literature matrix summarizing the discussion here can be found in Appendix B. Dementia, despair, and anxiety are common among residents of long-term care homes. Approximately two-thirds of these people have clinically significant behavioral problems such as falls, accidents, elopement, and behavioral instability (Coxey et al., 2021). Research has shown music helps people with dementia reconnect with their past experiences, lowering agitation-related destructive behaviors. Music may be a viable alternative to pharmaceutical treatment for dementia patients in nursing homes. Coxey et al. (2021) examined current studies to establish the effectiveness of music intervention vs. music therapy as a nonpharmacologic method of reducing agitation-related behaviors in dementia patients in nursing homes. The study suggested that music therapy can address unmet psychological needs and cut off stress to reduce agitation in patients with dementia. Singing and music with movement have been proven helpful for dementia treatments (Wang & Agius., 2018). Singing can contribute to a sense of wellness in music therapy, as evidenced by good self-esteem, a sense of accomplishment, and a sense of belonging. Music Therapeutic Caregiving, singing while delivering care, has elicited happy

feelings, reduced hostility, and fostered a sense of mutuality among caregivers. Physical activities such as music-with-movement, including singing, have alleviated depression symptoms. Participating in these activities can reduce the chance of falling and maintain motor skills, which can help PWD maintain their wellbeing.

As their cognitive faculties decline and they move into nursing homes, many persons with dementia suffer from depression (Wang & Agius., 2018). Even though many music therapists have created dementia-specific treatments that care workers may easily copy, little research has shown how combining music therapy and nursing can aid in maintaining depression symptoms reduction. Wang & Agius. (2018) in a study assessed music therapy for two weeks among the elderly. It showed that music works effectively in relieving the depressive symptoms of the patients in the facility. This study's results show music benefits patients and staff in acute dementia care facilities by enhancing their experiences and improving treatment. Wang & Agius. (2018) developed a systematic review on the background that both pharmacologic and non-pharmacologic interventions are used to manage neuropsychiatric symptoms in people with dementia. The study aimed to summarize the efficacy of the two interventions for managing aggression and agitation in those who have dementia. Wang & Agius. (2018) concluded from the review that non-pharmacologic interventions like music therapy are more efficacious than the use of drugs to reduce agitation and aggression in the elderly with dementia.

The use of music therapy in dementia care has been the focus of many studies. Some have found that it can help to enhance the quality of life and mood, while others have not (Ibenthal et al., 2022). Experts believe that music therapy can be an efficient tool for managing dementia-related psychiatric symptoms. One reason is that music has demonstrated its many desirable impacts on mood and brain function (Wang & Agius, 2018). For example, research has

shown that listening to music can increase happiness and well-being by improving cognitive function, including memory recall and task performance (Wang & Agius, 2018). Given these benefits, it is crucial for staff working with dementia patients to be conscious of the potential benefits of music intervention in dementia care. This awareness applies not only to those who are providing the therapy but also to those who are monitoring patient progress (Baker et al., 2019). It is also important for caregivers to be aware of the types of songs and melodies that may be most effective in treating neuropsychiatric symptoms in dementia patients. A study published by Gold et al. (2019) utilized a randomized controlled trial design to assess the impacts of music therapy on neuropsychiatric manifestations in persons living with dementia and their caregivers. Results showed that both groups experienced improvements in mood and well-being, but there was no substantial distinction between the two groups. Gold et al. (2019) highlighted that one of the major drawbacks impacting the effective application of music therapy to dementia patients was minimal staff awareness of how to leverage music to guarantee the realization of intended outcomes. Pedersen et al. (2017) analyzed the impacts of music interventions on agitation and anxiety in dementia patients. The results showed that music decreased agitation and anxiety levels in most participants. Pedersen et al. (2017) also found that compared to those who did not receive music therapy, those who received music had better behavioral outcomes such as improved communication and activities of daily living. Furthermore, another scientific investigation found that playing music enhanced feelings of happiness and well-being in older adults with dementia. This finding suggests that music may significantly benefit patients with dementia, even if they do not have agitated or anxious behaviors (Cooke et al., 2010).

Hanser et al. (2011) evaluated the effects of self-selected home listening programs on behavior and mood in dementia patients living at home. The program consisted of 15 minutes

daily listening to selected calming music tracks chosen by the patients themselves. The results showed that residents' moods improved, along with their intellectual activity and social interactions (Hanser et al., 2011). This program offers music as an effective intervention for dementia patients living at home or in assisted living facilities. These studies suggest that music can have a desirable effect on cognitive function and mood in dementia patients (Hanser et al., 2011). These studies provide evidence that increasing staff awareness of the benefits/advantages of music for neuropsychiatric symptoms in dementia patients is beneficial.

Staff awareness of music efficacy for neuropsychiatric manifestations in dementia patients has been sparsely researched; however, evidence suggests that increased awareness is linked to improved care for individuals with dementia. The study by Hanser et al. (2011) also assessed the impacts of music on caregivers of elderly individuals with dementia. The results demonstrated that caregivers who listened to music experienced improved mood, increased activity levels, and decreased stress levels (Hanser et al., 2011). However, the study was small and lacked control groups, so it is difficult to conclude whether the effects were due to the music or simply because caregivers spent time with patients.

While previous evidence has demonstrated that music can have a desirable impact on dementia patients, there is limited research on increasing staff awareness of this effect. More scientific investigations are required to understand better music therapy's implementation in care settings (Ibenthal et al., 2022; Ho et al., 2019). One study looked at the impacts of music interventions on cognitive decline in persons with Alzheimer's disease (Lyu et al., 2018). The study (Lyu et al., 2019) established that listening to music had a desirable impact on overall cognitive function, vocabulary, and reading ability. The researchers believe that the benefits of

music may be due to its interactional nature, which helps people with dementia feel connected to others and engage in activities they enjoy.

Many older adults live in long-term social and health care facilities and cannot access professional music therapists. Therefore, the responsibility often falls upon nurses since they provide the most direct patient care. Ekra & Dale (2020) conducted an explorative and qualitative study to investigate how healthcare providers such as nurses experienced providing music therapy to people with dementia-related psychiatric symptoms in various nursing homes. The study's outcomes showed three categories of nursing attitudes: nurses became more self-conscious and aware after participating in the music program, evoked real emotions for patients and healthcare providers, and the music program-maintained nurses' enthusiasm. Based on a study on 17 healthcare providers from 3 different nursing homes, Ekra & Dale (2020) observed that most healthcare providers reported positive patient and staff outcomes. However, Ekra & Dale (2020) also noted that many nurses commented on the music program's unsustainability, especially without professional music therapists. Making the program a part of their daily job routine was difficult. The research by Skingley, McCue & Vella-Burrows (2020) reports that nurses are open to using music therapy for patients with dementia because it is a tool through which they can connect with their patients. Therefore, there is a "mutuality of communication" between the patients and the nurses. There is little research regarding the professional opportunities that arise from music programs. Skingley, McCue & Vella-Burrows (2020) references extant literature showing the development of a relationship-based model that nurses can use to diversify their careers in providing care for people with dementia-related psychiatric symptoms. Furthermore, Ray & Götell (2018) show that most nurses support using

music as a non-pharmacologic intervention tool when caring for people with dementia because it improves their well-being.

The first step in improving dementia care with music is increasing staff awareness of its efficacy. According to the study by D'Angelo et al., (2016), music therapy has been found to be an effective intervention for reducing symptoms and improving quality of life. However, only 41% of nurses surveyed reported being familiar with the benefits of music therapy (D'Angelo et al., 2016). Having updated policies in place will increase staff efficacy and ensure that patients are getting the most benefit from music therapy.

Facilities can update policies by mandating minimum training requirements for those who would be providing music therapy services (Spiro et al., 2017). This training would cover topics such as the neuroscience behind music therapy, improvements on dementia care outcomes, and how best to provide music therapy to patients. Implementers can keep policies updated by specifying the types of music used in dementia care (Spiro et al., 2017). Baker et al. (2019) state that there is a lot of variability in the types of music that are used in dementia care, which can lead to inconsistent results. Lastly, policies could be updated to mandate the utilization of patient logs for evaluating the efficacy of music intervention (Baker et al., 2019). These logs would track how patients feel before and after listening to music, as well as any changes that occur in their symptoms. This information would help policymakers determine which types of music are most effective for improving dementia care outcomes and how best to provide it to patients (Baker et al., 20).

As the population ages, dementia will become a more common condition. According to the Alzheimer's Association, by 2050, over 24 million individuals will be living with dementia in the United States (Alzheimer's Association, 2018). As this population grows, so will the

number of people with neuropsychiatric symptoms due to dementia. However, there is no cure for dementia nor reliable treatment for neuropsychiatric symptoms (Alzheimer's Association, 2018). Policies aimed at addressing these problems are an essential part of dementia care.

There is evidence that policies aimed at increasing staff awareness of music efficacy for neuropsychiatric symptoms in dementia patients are an effective tool for addressing these problems. A study published in the Journal of Dementia found that among nurses working in long-term care facilities, those who were most familiar with music therapy were more likely to identify and refer patients with neuropsychiatric symptoms (Garcia et al., 2017). In another study, Liu et al. (2016) found that among staff working in a hospice setting, those who were most familiar with music therapy were more likely to report better patient outcomes. These studies suggest that policies promoting music awareness as a possible efficient alternative for neuropsychiatric symptoms in dementia patients are an effective tool for addressing these problems. Overall, the available evidence suggests that policies aimed at increasing staff awareness of music efficacy for neuropsychiatric symptoms in dementia patients are an effective tool for addressing these problems.

Organizational Project information

The project director was unable to secure an agency to develop and implement the policy with, therefore the proposal was modified to develop a general music related policy for an agency of mid-size, specializing in patients with dementia, with a patient population of 12-to 36 patients. This Project proposal was to develop a policy that was generalizable, based on evidence and which used best practices. The Policy developed targets both healthcare workers and dementia patients, stakeholders involved with this policy development and potential

implementation would be drawn from various organizations including inpatient geriatric units, nurse managers, mental health case workers, psychiatrist, nurses, social workers and caregivers.

Gap Analysis

The effectiveness of a music program relies on the skills of the people facilitating it (McDermott 2018). Not all staff members and caregivers can use music in dementia patients safely and effectively (McDermott, 2018). A search of the investigator's place of employment indicated there was no existing policy on the use of music for any patient population. Volunteers, on rare occasions, present themselves and inquire if there are patients who would like a music session. Staff members, having not collected such data due to the lack of a policy, cannot make recommendations. McDermott, (2018) argues the skill of music is a newer intervention that has not been shared with other healthcare workers by music therapists. By sharing the music skill with direct care staff, the music therapists can withdraw, leaving direct care staff to implement music incorporated with activities of daily living (McDermott, 2018). As reviewed above in the literature synthesis, while much literature exists related to music therapy, no consistent policy recommendation has been published in available literature.

Needs Assessment

Given the growing rate of dementia, there is an increasing need for staff to be aware of the benefits of music in patients with neuropsychiatric symptoms. In particular to reduce the negative side effects of the use of antipsychotic medications. A study by Ibenthal et al. (2022) found that music listening increased happiness and well-being in both young and elderly adults. These findings suggest that music can be advantageous for various psychiatric conditions, including dementia. Although there is a lack of conclusive evidence linking music with a reduction in neuropsychiatric symptoms, there is a growing body of research indicating its

potential benefits. Trainor (2018) states music can reach the part of the brain where we hold memories, making it a powerful therapy for dementia patients. Ekra & Dale (2020) in a study, showed that by participating in a music program, dementia patients were able to recall songs and evoke memories of their childhood which was a start to good conversations and storytelling. Staff should be made more aware of these studies and encouraged to incorporate music into their treatment plans for dementia patients. A fishbone diagram as seen in Appendix C illustrates the benefits the increased use of music will have on both staff and patients.

Strengths, Weaknesses, Opportunities, and Threats

Strengths. Music is a simple, readily available intervention with low cost and limited side effects that has been shown to improve behaviors. Most studies found that music had a desirable effect on behavioral outcomes, physical health, and social participation in dementia patients. **Weaknesses.** The literature review found limited research on music efficacy for neuropsychiatric symptoms in dementia patients, particularly on policies for increasing staff awareness of music efficacy. More studies could elucidate the mechanisms by which music may have these benefits. **Opportunities.** More research is needed to determine the best ways to include music therapy in interventions for neuropsychiatric symptoms in dementia patients, however, a standardized policy could improve the behavior of existing patients if made available via development of a policy with recommendations for specific assessments and intervention tools. **Threats.** Some staff members and caregivers of dementia patients may not feel comfortable administering music therapy to patients, while others do not know music's benefits to dementia patients. Facilities taking care of dementia patients may shun music owing to the need to train staff and hire music therapists.

Guiding, Theoretical Framework/ Change Theory

Theoretical Framework

Gerdner's Mid-Range Theory was the conceptual model upon which this policy recommendation endeavor was supported. The elements of the theory of individualized music therapy include cognitive decline, the reduced threshold for stress, agitation, and individualized music (Gerdner, 2012). The theory proposes creating an individualized music program based on a person's preference. Playing such music is equivalent to communicating with patients even at advanced stages of dementia. The music can create an opportunity to stimulate remote memory, which overrides environmental stimuli, which can be confusing and meaningless (Gerdner, 2012). The policy presented here is underpinned and supported by Gerdner's theory as it recommends implementing elements appropriate to the theory.

Change Theory

This study proposes to increase staff awareness of music efficacy for neuropsychiatric symptoms in dementia patients. Change theory can be used to explain how this study will be implemented. The theory suggests that when individuals experience change, they are more likely to adopt new behaviors and attitudes (Reinholz et al., 2021). By participating in the initial MiDAS assessments, the nursing staff will witness the change in the patient after the music therapy administration and determine if a change has occurred in patient behavior. In cases of observed change, the staff is more likely to continue administering music to patients. This study will implement change by providing staff with information about the benefits of music for neuropsychiatric symptoms in dementia patients. Team members can then make informed decisions about whether to use music as a treatment option for their patients.

Aims, Goals/Objectives Clarified

Goals and Smart Objectives

The primary goal of this project is to develop a policy recommendation for an acute care agency's geriatric unit that recommends implementing and sustaining music therapy as an adjunct for reducing agitation in demented patients.

Objective 1

By week 2 of the project, an updated literature review will be performed by the project director to identify any new or relevant literature for policy development. The articles will be added to the literature review matrix in appendix B. This objective will be measured nominally as met or not met.

Objective 2

By week 4 of the project, the project director will have contacted stakeholders to identify current policies at the agency related to the identification and treatment of agitation and BPSD at the agency's geriatric unit. This goal will be measured as met or not met.

Objective 3

By week 6 of the project, the project director will have reviewed and identified the best practice recommendation for the policy recommendation and will identify any tools from the literature for implementing and evaluating the use of music interventions.This will include the development of a protocol for nursing staff, an implementation plan, and an evaluation plan to be included with the policy recommendation. This goal will be reported as met or unmet.

Objective 4

By week 7 of the project, the director will have developed an educational PowerPoint that reviews the importance of recognizing agitation, the use of music therapy, and its role in improving both the agency and patient outcomes. This presentation will be included as part of the policy recommendation as an appendix. This objective will be measured as met or unmet.

Objective 5

By week 8, of the project the project director will have identified and contacted a minimum of 3 content experts who are willing to review the policy and associated materials. This goal will be measured as met or unmet.

Objective 6

By week 10 of the project, the policy will be completed and sent to evaluators for assessment. A survey will be developed and included with the policy to guide evaluation and feedback for the policy. This goal will be measured as met or unmet.

Objective 7

By week 12 the project, the director will have incorporated and updated the policy recommendation and materials and will complete a final report. The final report will include an updated PowerPoint presentation which can be used if the agency or any other agency would like a copy of the policy. This goal will be measured as met or unmet.

GANTT Chart

The GANTT chart is illustrated in Appendix E of this project. It is attached below. The project timeline was seven months. The activities covered in the GANTT included:

- Finalizing a literature review.
- Creating a policy proposal IRB application and.
- Making necessary amendments based on professional feedback.

Work Breakdown

The work breakdown is represented in Appendix F of the project. It represents the plan for the implementation of the project as laid out in the GANTT chart, the logic model, and the policy recommendation.

The Logic Model

The logic model is represented in Appendix G and represents a visual representation of the shared relationships that must interact to bring about the finished projects. In it are inputs, outcomes-short-term, midrange, and long-term. The logic model also addresses external factors and assumptions that can influence the completion of the project.

Budget

This project is a project proposal and will not incur any expenses directly other than the time of the project director and project advisor. However, development and implementation of such a policy would incur costs. These would include the time for the stakeholder meetings and each person's hourly rate. The cost of equipment for music therapies, costs of training staff and sustaining training and equipment. Therefore the costs for this project, while minimal, do not mean the implementation would be without impact. As this is a policy recommendation a full evaluation of the budget will not be included here.

Methodology and Analysis

Intervention Plans

This project has been divided into pre-implementation, implementation, and post implementation phases. During the pre-implementation phase, the projector leader will carry out a literature review on current knowledge and scientific evidence on the use of music in the

management of dementia patients. Selected articles will be added to the matrix table. A review of existing policies will be completed, and a best practice recommendation developed.

During the implementation phase, the project leader submitted the policy recommendation to the selected experts for review. The experts appraised the strength of the policy using a modified Appraisal of Guidelines in Research and Evaluation (AGREE) II form-Appendix I. The writer used the feedback to improve the policy and tools. During the post-implementation phase, the project leader analyzed the feedback from the experts. The results of the evaluators feedback is presented in a pie chart and a graph bar in Appendix J.

IRB/Ethical Considerations

The project is a policy proposal and therefore does not have any human subjects, therefore HIPAA considerations are not applicable. The project underwent review by the IRB review board at the College of Saint Scholastica to ensure all ethical considerations are in place and adhered to. The professional experts personal information will not be published and will be secured by the project leader.

Implementation

The implementation phase includes the information in the methodology and analysis section. This project does not involve actual human subjects but is a policy recommendation that the project leader wrote and presented to professional experts who evaluated and gave feedback and recommendations for improvement.

Results From Data Collection

The results for the 5-point Likert Evidence-Based Practice Recommendation Survey of the policy is listed below:

Do you feel the overall objective(s) of the guideline is (are)clear? Hundred percent of the professional experts strongly agree.

Do you feel the purpose of music therapy for BPSD in dementia patients(s) covered by the guideline is (are) clear? A hundred percent of professional experts strongly agree.

Do you feel the population (patients, public, etc.) to whom the guideline is meant to apply is clear? A hundred percent of the professional experts strongly agree.

Do you feel the guideline includes individuals and stakeholders that you feel are relevant for this policy? A hundred percent of professional experts strongly agree.

Do you feel the methods for formulating the recommendations are clearly described? Eighty percent of professional experts strongly agree, twenty percent of professional experts agree.

Do you feel the health benefits, side effects and risks were considered in formulating the guideline? Eighty percent of professional experts strongly agree, twenty percent of professional experts agree.

Do you feel the recommendations are specific and unambiguous? Eighty percent of professional experts strongly agree, twenty percent agree.

The guideline describes facilitators and barriers to its application. A hundred percent of professional experts strongly agree.

Do you feel the guideline provides advice and/or tools on how the recommendations can be put into practice. Eighty percent of professional experts strongly agree, twenty percent of professional experts agree.

Do you feel the guideline presents monitoring and/ or auditing criteria? A hundred percent of professional experts agree.

Would you recommend this guideline for use? Sixty percent of professional experts would recommend the policy recommendation as was initially. Forty percent would recommend some modifications. The modifications recommended were implemented before policy was sent back to professional experts for a second review.

The qualitative feedback from the evaluators of the policy are listed below in statements from the evaluators.

Would you recommend this guideline for use?“ Yes, It's a good and relevant policy recommendation that could apply to many populations not just dementia”

“Yes**,** This is a wonderful guideline for the geriatric unit. It works both ways because it can also identify people who don’t benefit from music. Staff might have a lot of trouble tabulating 100 mm though, is there a simpler way to measure the response?”

“Yes, Having a personalized way of offering music would be beneficial. I don’t think many facilities use any tools to gauge patients' appreciation. Facilities may push back on training staff and the evaluation measure could be simpler. Maybe use a shorter Likert format instead of the 100 mm ruler.” These results are presented in a graph and a pie chart in Appendix J.

Discussion of Data/Outcomes Interpretation

The data for this policy recommendation is the feedback received from the evaluators. The evaluators received the first draft of the policy which they gave feedback and recommendations to improve. After this review, the investigator revised the policy based on the feedback and sent it back for the evaluators final review. The experts strongly agreed with Likert questions 1,2,3,4,5, 7,8 and 10. Eighty percent of the evaluators strongly agreed with Likert questions 6 and 9 while the other twenty percent agreed with the Likert questions.

Dissemination

This policy recommendation project will be disseminated through a project poster in Appendix L and a 3MT video in Appendix M.

Abstract

Policy Recommendation to Increase Staff Awareness on Music Efficacy in Management of Dementia Related Neuropsychiatric Symptoms by Use of The MIDAS Assessment Tool.

Nature and Scope of the project: Dementia is one of the leading healthcare challenges of the 21st century, with an estimated 5.7 million Americans living with the condition. Neuropsychiatric symptoms can be challenging to deal with, and they often lead to increased levels of stress and anxiety for caregivers. Music therapy can help minimize neuropsychiatric symptoms, such as depression, anxiety, and agitation among people with dementia. Despite this evidence, many staff members are unaware of the efficacy of music therapy for these symptoms and may not recommend it to their patients.

The objective of this project is to recommend a policy for the acute care agency's geriatric unit to implement and sustain music therapy through the use of the Music In Dementia Assessment Scale (MIDAS) assessment tool to identify dementia patients who are receptive to music therapy.

Synthesis and Analysis

MIDAS measures the effect of music on a patient through the recording of target behaviors in a dementia patient before exposure to music and after exposure to music. Music has been shown to have a beneficial impact on neuropsychiatric symptoms common in dementia, yet little is known about staff awareness or perceptions of its efficacy. Gerdner's Mid-Range Theory proposes an individualized music program based on a person's preference.

Implementation Process

The implementation process for this project involves creating a policy that utilizes MIDAS to increase staff awareness of music benefits to dementia patients. The policy is referenced in Appendix H. A selected group of five experts will evaluate the policy. The experts include an academic, a nurse manager, a case worker, a nurse clinician and a psychiatrist.

Evaluation Criteria

The selected experts evaluated the developed policy using an evidence-based questionnaire. The AGREE II form, a 5-point Likert scale, was used by the experts for this evaluation.

Outcomes: The policy was sent to the experts and the outcome has been disseminated through a bar graph and a pie chart in appendix J.

Recommendations

The developed policy will inform nursing staff and care management collaborators of the effect of music on dementia patients by use of the MIDAS tool. The use of this scale in inpatient and care settings will identify patients with an appreciation for music and this clear data will inform implementation of music therapy for dementia patients.

KEYWORDS: *MIDAS, DEMENTIA, NEUROPSYCHIATRIC SYMPTOMS, AGREE II*

Conclusion

Dementia is a growing health concern in the United states and worldwide that continues to grow exponentially. The management and care of dementia patients requires an abundance of resources, while the medications employed in the management of associated behaviors are often ineffective or come with a host of harmful side effects. The use of music in the management of dementia related behaviors has shown promise in studies even though many healthcare workers are ill equipped to implement it due to low literacy on its application.

The implementation of the MiDAS assessment tool in healthcare settings and education of healthcare workers has the potential to reduce the burden on care for those working with dementia patients. The findings of the project showed many experts agreed with the implementation of such policies in health care settings. The focus of this project was to develop a health policy based on findings in literature reviews. Future steps would involve implementing the health care policy in an acute geriatric mental health unit.

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Appendices

Appendix A: Music in Dementia Assessment Scales (MiDAS) Form/Staff Education Tool

Patient Name

Completed by:

Date: **Time of rating:**

Indicate which rating this is (tick one): **1. Before** **2. After**

If the person appeared asleep for most of the time, do not score question 1-6, but continue to question 7.

1. Levels of Interest in objects/activities/people around him/her (attention). For example:

· Did he/she show interest in an activity or other people around him/her?

· Did his/her posture or facial expression change if activities or music caught his/her attention?

· Did he/she become animated if activities or music caught his/her attention?

1 Never, 2 Rarely, 3 Occasionally, 4 Frequently, 5 Always

2. Levels of Response in communication/activity (awareness, interaction). For example:

· Did his/her facial expression or body-movements indicate his/her awareness of staff or therapist?

· Did he/she make eye-contact with staff, therapist, or other group members?

· Did he/she join in conversation; music making or make vocal sound?

1 Never, 2 Rarely, 3 Occasionally, 4 Frequently, 5 Always

3. Levels of Initiation in communication/activity (intention). For example:

· Did he/she try to communicate with staff, therapist, or other group members?

· Did he/she start conversation, start music making, or initiate vocalization?

· Did he/she talk about his/her life experiences (reminiscence) or mention music meaningful to them?

1 Never, 2 Rarely, 3 Occasionally, 4 Frequently, 5 Always

4. Levels of Involvement in communication/activity (participation). For example:

· Did he/she become engaged in conversation, music making, or any form of communication?

· Did he/she show enthusiasm in activities that interest him/her?

1 Never, 2 Rarely, 3 Occasionally, 4 Frequently, 5 Always

5. Levels of Enjoyment during communication/activity. For example:

· Did he/she smile, laugh, or show a brighter mood?

· Did he/she show playfulness, sense of humor?

· Was he/she relaxed?

1 Never, 2 Rarely, 3 Occasionally, 4 Frequently, 5 Always

6. During this period of time did you notice any major reactions from the person?

Indicate if only major reactions are observed. Use this list as supplementary information to the five VAS.

Agitated/aggressive ☐	Relaxed ☐
Withdrawn/low in mood ☐	Attentive/interested ☐
Restless/anxious ☐	Cheerful/smiling ☐

7. Any comments?

Instruction

MiDAS (Music in Dementia Assessment Scales) aims to assess if there have been changes in the wellbeing of a person with dementia participating in Music Therapy. Both staff and therapist complete two forms each per session to evaluate the potential changes. MiDAS

uses Visual Analogue Scales; the ‘Highest’ score on the scale should be set as the optimum level the individual can achieve. This means that each individual will have a unique set of ‘Highest’ levels for each category.

1 Never, 2 Rarely, 3 Occasionally, 4 Frequently, 5 Always

Appendix B: Matrix Table

Citation	Purpose	Research Design	Methodology	Findings	Conclusion	Critical Appraisal Tool & Rating
American Geriatrics Socie Beers Criteria Update Expert Panel (2015). American geriatrics society 2015 updated beers criteria for potentially inappropriat medication use in older adults. *Journal of The*	Serves as a guide to prevent inappropriate drug utilization in the elderly.	Expert panel compilation	Formulated by experts using the Delphi method.	Antipsychotic drugs pose risk to elderly and should not be 1st choice intervention	Appropriate to use only when other interventions have failed due to side effects and low efficacy.	Level I

American Geriatrics Society, 63, 2227–2246						
Bartfay, W. J., W, T., Bartfay, E., Zavitz, K., Earle, J., Hosbourgh, S., ... & Theiventhiran, D. (2020). A Personalized Music Intervention (PMI) to decrease BPSDS in patients with dementia on a geriatric dementia unit: promoting patient-centered care and quality of life. *Am J*	Evaluate the benefits of personalized music interventions (PMI) on managing behavioral and psychological symptoms of dementia	PMI delivered via directional parabolic speakers to patients. Each PMI session was 90 minutes total separated into 30-minute intervals of pre-intervention, intervention, and post-intervention administered twice	A pilot exploratory descriptive study was conducted using personalized music interventions (PMI)	Out of the 8 conducted 90 minute sessions per patient, improvement in the reduction of BPSD symptoms was demonstrated 93.75% of the time. Following	PMI may offer promise as a low-cost, safe and patient-centered non-pharmacological intervention to prevent and manage the occurrence of BPSD in	Level IV

*Biomed Sci Re*s, 9(4), 298-305.	(BPSD) on a geriatric dementia unit (GDU)	weekly for a total of four weeks.			patients with dementia	
Billhorn, C. (2018). Does music therapy decrease agitation in patients with dementia?	Intended to identify whether or not music therapy decreases agitation in patients with dementia	Literature review of selected studies and articles. The methods section of each was analyzed to check for controls, validated scales, patient selection	Review of studies and articles	Widespread use may provide an increase in QOL and a reduction in the use of antipsychotic medications in which overuse	Music therapy should be considered an option in managing agitation in patients with dementia that do not have any absolute	Level V

		processes, and analysis technique.		has been criticized	indications for antipsychotics	
Carrarini, C., Russo, M., Dono, F., Barbone, F., Rispoli, M. G., Ferri, L., & Bonanni, L. (2021). Agitation and dementia: Prevention and treatment strategies in acute and chronic conditions. *Frontiers in Neurology*, 12, 480.DOI: https://dx.doi.org/10.3389%2Ffneur.2021.644317	Review provides a toolbox for the detection, prevention, and therapeutic management of acute and chronic agitation in patients	Review of RTCs	Review of RTCs on major psychotropic drugs and their efficacy.	The agitation associated with neurodegenerative diseases can occur at any disease stage and takes a significant toll on patients and caregivers. To date, precise and useful recommendatio	Pharmacological treatments should be implemented as a second choice, whereas non-pharmacological interventions should be person-centere	Level I

	suffering from neurodegenerative conditions			ns are still lacking	d, preferred, and prioritized	
Coxey, J. P., Kameg, B., Novosel, L. M., & Lee, H. (2021). Music and nursing home residents with dementia: A literature review. *The Journal for Nurse Practitioners*, 17(7), 808-814.	Investigates the current research to determine the effect of music intervention vs music therapy as a nonpharmac	Literature review	A systematic search was conducted using the CINAHL, PsychINFO, and PubMed databases	inconsistent results seen lead one to question whether the behavior improvements observed were the product of music (therapy or intervention)	Music therapy can address unmet psychological needs and cut off stress to reduce agitation in	Level I

https://doi.org/10.1016/j.nurpra.2021.03.011	ologic means of reducing agitation associated behaviors in older nursing home residents with dementia			or simply due to the presence of staff/researcher attention	patients with dementia	

Dawson, W. D. (2018). Im on care of an increasing population living with Alzheimer's disease and dementia: The 21st century challenge. *Seniors Housing Care Journal,* 26(1), 96–1(	To explore how system wide issues will affect care of dementia patients	An expert opinion examining the future of care for dementia patients in light of system wide challenges.	Review of data from government sources on current statistics and available resources	Current policy and resources allocated to care of elderly through Medicare and Medicaid are not enough to manage the expanding population of dementia patients.	Providers must prepare for and adapt to the increasing need for dementia care and support.	Level IV

Daykin, N., Parry, B., Ball, K., Walters, D., Henry, A., Platten, B., & Hayden, R. (2018). The role of participatory music-making in supporting people with dementia in hospital environments. *Dementia*, 17(6), 686-701. https://doi.org/10.1177%2F1471301217739722	To evaluate the use of music in enhancing the wellness of dementia in acute care settings.	A mixed methods study-Observational data, semi-structured interviews, and focus groups with patients, visitors, musicians, and staff investigated participant well-being	A mixed methods study examined the effects of a ten week period of weekly music sessions on the wellbeing of patients with dementia	Comparison between the two periods showed a number of differences between the music and the non-music time periods, including a reduction in prescription of antipsychotic drugs	Music is a useful intervention for enhancing patient and staff experiences and improving care in acute dementia care environments. The suggestion that use of antipsychotic drugs may be reduced when	Level II

					music is present warrants further research	

Dyer, S. M., Harrison, S. L., Laver, K., Whitehead, C., & Crotty, M. (2018). An overview of systematic reviews of pharmacological and non-pharmacological interventions for the treatment of behavioral and psychological symptoms of dementia. *International Psychogeriatrics*, 30(3), 295-309.	To compare efficacy of pharmacological and non-pharmacological interventions in dementia management	Systematic overview reports findings from systematic reviews of randomized controlled trials of pharmacological and non-pharmacological interventions for behavioral and psychological symptoms of dementia	The Cochrane Database of Systematic Reviews, DARE, Medline, EMBASE, and PsycINFO were searched	standardized mean difference (SMD) -0.10, 95%CI -0.20 to 0.00), music therapy (low; SMD -0.49, 95%CI -0.82 to -0.17), analgesics (low; SMD -0.24, 95%CI -0.47 to -0.01), donepezil (high; SMD -0.15 95% CI -0.29 to	Although some pharmacological interventions had a slightly larger effect size, current evidence suggests functional analysis-based interventions should be used as first line management of BPSD	Level I

				-0.01), galantamine (high; SMD -0.15, 95%CI -0.28 to -0.03), and antipsychotics (high; SMD -0.13, 95%CI -0.21 to -0.06)	whenever possible due to the lack of associated adverse events	

Ekra, E. M. R., & Dale, B. (2020). Systematic use of song and music in dementia care: Health care providers' experiences. *Journal of Multidisciplinary Healthcare*, 143+. https://link.gale.com/apps/doc/A618135156/HRCA?u=mnacstsch&sid=bookmark-HRCA&xid=6ec5f00b	To explore how health care providers experienced taking responsibility for conducting a song and music program in dementia care in	An explorative, qualitative study design was used. Focus groups were formed by 17 health care providers from 3 different nursing homes	Focus group interviews were transcribed verbatim, and systematic text condensation was used for analyzing the data	1) the music program increased the staff's consciousness and awareness; 2) the music program evoked the patients' emotions and reactions; and 3) maintaining enthusiasm over time	Using the song and music program in a systematic and planned way had many benefits and positive impacts on the patients and staff. However, it was challenging to make it a part	Level III

	nursing homes.				of the daily routine.	
Eriksen, M. B., & Frandsen, T. F. (2018). The impact of patient, intervention, comparison, outcome (PICO) as a search strategy tool on literature search quality: a systematic review. *Journal of the Medical Library Association : JMLA*, *106*(4), 420–431.	To find out if use of patient, intervention, comparison, outcome model affects the quality of literature research.	Systematic review of research articles.	A comprehensive literature search was conducted in PubMed, Embase, CINAHL, PsycINFO, Cochrane Library, Web of Science, Library and Information Science	Studies compared PICO to unguided searching.	The PICO model resulted in a higher average sensitivity and lower average precision than did unguided searching.	Level I

https://doi.org/10.5195/jmla.2018.345			Abstracts (LISA), Scopus, and the National Library of Medicine (NLM) catalog up until January 9, 2017			
Hack, K., Martin, K., & Atkinson, C. (2021). The effectiveness of music as an intervention for dementia patients in acute settings: A	To analyze effective remedies for dementia in acute care settings.	A database search identified 204 papers, of which 10 studies satisfied criteria and were reviewed.	A database search identified 204 papers, of which 10 studies satisfied criteria and	Four areas that music was found to improve outcomes for dementia patients in acute	The most reliable evidence is currently within mood and behavior domains	Level 1

literature review. *Music and Medicine*, 13(4). https://doi.org/10.47513/mmd.v13i4.787			were reviewed. A quality assessment framework was applied, with the majority of studies scoring highly (above 80%).	settings: mood and wellbeing, behavioral and psychological symptoms of dementia, and use of inpatient resources	reflecting positive change following music intervention for inpatients	
Hirsch, C. (2020). In dementia with aggression and agitation, several interventions help vs. usual care. *Annals of*	To compare the efficacy of drugs to non-drug intervention s for	Meta-analysis of RCTs that comparedrug to non drug therapies.	37 types of interventions, alone or in combination, were evaluated, including 13	Antidepressants are relatively ineffective. Antipsychotic drugs showed significant	Drugs are used more because many caregivers lack time or resources for	Level I

Internal Medicine, 172(6), JC31. https://doi.org/10.7326/ACPJ202003170-031	aggression and agitation.		drugs; most comparisons were with usual care or placebo	benefits for psychosis but not agitation.	implementing non-pharmacologic interventions.	
Ibenthal, E., Kehmann, M., & Backhaus, C. (2022). Effectiveness of personalized music systems to influence neuropsychiatric symptoms associated with dementia: A quasi-experimental	To determine the effectiveness of personalized music systems on the neuropsychiatric	Randomized control groups based on housing units	Housing units were assigned as an intervention or placebo group. caregivers used the Neuropsychiatric Inventory Questionnaire (NPI-Q, to	Average severity values between both study groups was reduced by at least 10% during the intervention phase. The average severity value of apathy	Due to mixed results, future studies should focus on personalized playlists and focus on effect on quality care and caregivers wellbeing.	Level I

study. *Explore,* 18(3), 319-326.	symptoms of people with dementia in residential care and the perceived distress of caregivers		evaluate the severity of the residents' 12 neuropsychiatric symptoms during pre-post-follow up assessments	only remained consistent in the control group.		
Kester, R., Unützer, J., Hogan, D., & Huang, H. (2017). Antipsychotic prescribing patterns in a Medicare Advantage	To study antipsychotic drug prescribing patterns for Medicare	Exploratory secondary data analysis	Humana Medicare Advantage enrollees 65 years and over with diagnosis	12.2 % of those diagnosed with dementia were prescribed	Care management programs serving Medicare Advantage	Level I

population of older individuals with dementia. *Journal of Mental Health* (Abingdon, England), 26(2), 167–171. https://doi-org.akin.css.edu/10.1080/09638237.2016.1244720	Advantage recipients with dementia		of dementia were sampled.	antipsychotic medication.	enrollees have opportunities to reduce inappropriate use of antipsychotic medications on dementia patients.	
Koller, D., & Bynum, J. P. W. (2015). Dementia in the USA: State variation in prevalence.	To pinpoint variation in dementia prevalence	A random sample of medicare beneficiaries.	A study based on a 20% sample of Medicare beneficiaries in 2008. The crude	The prevalence is higher than the diagnosed in most states.It is estimated over 100 000	The high variation means cases are not even across states and there	Level IV

Journal of Public Health, 37(4), 597–604.	across states.		dementia prevalence was calculated, and age/sex standardized to the US population for states.	undiagnosed dementia patients in Medicare	should be different planning at state level.	
Lam, Y. W. F. (2019). CNS‐active drugs and risk of fall. *Brown University Psychopharmacology Update*, 30(7), 2–3.	To investigate link between falls and use of	Longitudinal data from inpatient and outpatient visits, prescription drug claims, and hospital procedures for 9	Cohort study (retrospective)	Use of CNS-active drugs is associated with falls and potentially hip fracture,	There is a link between CNS-active drugs and falls and increased morbidity and	Level III

https://doi-org.akin.css.edu/10.1002/pu.30445.	CNS-active drugs	million individuals were analyzed for assessment of the association		resulting in increased morbidity and mortality	mortality in elderly	
Marcinkowska, M., Śniecikowska, J., Fajkis, N., Paśko, P., Franczyk, W., & Kołaczkowski, M. (2020). Management of dementia-related psychosis, agitation and aggression: A review of the pharmacology and clinical effects of	To investigate and highlight advances in developing drugs that target relevant biological targets and	A review the compounds that are in the early stage of development (discovery or preclinical phase) and those that are currently being investigated in clinical trials for	A review of the pharmacology and clinical effects on targeted patients	Polymorphism of serotonin 5-HT2AR has been associated with onset of psychosis and aggression in Alzheimer's disease. Selective inverse agonists	There have been promising results with compounds modulating serotonergic signaling. Further clinical studies and approval	Level I

potential drug candidates. *CNS drugs*, *34*(3), 243–268. https://doi.org/10.1007/s40263-020-00707-7	their etiology	dementia-related psychosis and agitation/aggression		of 5-HT2AR (pimavanserin) and novel atypical antipsychotics acting as 5-HT2A antagonists (lumateperone, brexpiprazole) have shown promise in clinical trials.	present hope for dementia patients.	

McDermott, O., Orgeta, V., Ridder, H. M., & Orrell, M. (2014). A preliminary psychometric evaluation of Music in Dementia Assessment Scales (MiDAS). *International Psychogeriatrics*, 26(6), 1011–1019. https://doi.org/10.1017/S1041610214000180	The aim of the study is to evaluate the psychometric properties of MiDAS.	An observational outcome measure for music therapy with people with moderate to severe dementia, was developed from qualitative data of focus groups and interviews	Nursing home residents with moderate to severe dementia attended weekly group music therapy. Music therapists and nursing staff were requested to complete weekly MiDAS ratings	Staff and therapists who participated in the main study confirmed the clinical relevance of MiDAS, and the preliminary psychometric evaluation revealed that MiDAS has acceptable to good	The study indicates that MiDAS has adequate psychometric properties on a range of attributes even though the sample size was small.	Level IV

				psychometric properties		
McDermott, O., Orrell, M., & Ridder, H. M. (2018). The development of Music in Dementia Assessment Scales (MiDAS). *Nordic journal of music therapy,* 24(3), 232–251. https://doi.org/10.1080/08098131.2014.907333	The aim was to develop a clinically relevant and scientifically robust music therapy outcome measure incorporating the values and views of	Expert and peer consultations were conducted during the data transformation and the theory development process, and further data reduction and the finalization of scale items were also supported	Mixed methods exploratory design: the instrument developmental model.	The application of VAS may be one of the strengths of MiDAS, the use of VAS also proved to be a challenge, and the inconsistency of the MiDAS raters is one of	Review has shown MiDAS to have adequate psychometric properties in terms of reliability, internal consistency, concurrent validity and	Level III

	people with dementia	through the consensus method		the limitations of this study.	construct validity	
Moreno-Morales, C., Calero, R., Moreno-Morales, P., & Pintado, C. (2020). Music therapy in the treatment of dementia: A systematic review and meta-analysis. *Frontiers in Medicine*, 7, 160. https://doi.org/10.3389/fmed.2020.00160	To investigate whether the application of music therapy in people living with dementia has an effect on cognitive function, quality of	Systematic review and meta-analysis	Searches were done on these databases: Medline, PubMed Central, Embase, PsycINFO, and the Cochrane Library.	Use of music improves cognition, quality of life, and long-term depression when applied to dementia patients.	Music could be a powerful tool. Further studies are needed to develop standardized protocols depending on stage and nature of dementia.	Level I

	life, and/or depressive state					
Pedersen, S. K., Andersen, P. N., Lugo, R. G., Andreassen, M., & Sütterlin, S. (2017). Effects of music on agitation in dementia: a meta-analysis. *Frontiers in Psychology,* 8, 742.	To evaluate the effect of music intervention on agitation in dementia patients.	A meta-analysis	Data collected from databases CINAHL, medline, pubmed	The meta-analysis showed benefits to agitation by applying music therapy	Further studies needed with differential diagnosis, clinical samples.	Level I

Roberts, J., Canales, A. G., Blanthorn-Hazell, S., Boldeanu, A. C., & Judge, D. (2018). Characterizing the experience of agitation in patients with bipolar disorder and schizophrenia. *BMC Psychiatry*, 18(1), 1-8.	To analyze agitation in persons residing in the community	A cross-sectional survey conducted in Germany, Spain and UK of patients diagnosed with bipolar disorder or schizophrenia	Data was collected from patients living in the community. Caregivers interviewed through a caregiver questionnaire. The study was reviewed and approved by an international ethics committee for	For many patients, agitation was associated with internal feelings (e.g. feeling tense, restless and uneasy) more commonly than more overt behaviors such as aggression.	The importance of more subtle symptoms for many patients which represent a potentially unseen psychological burden.	Level V

			centralized methodological ethics approval			
Perng, C.-H., Chang, Y.-C., & Tzang, R.-F. (2018). The treatment of cognitive dysfunction in dementia: A multiple treatments meta-analysis. *Psychopharmacology,* 235(5), 1571–1580. https://doi-org.akin.css.	To evaluate factors affecting treatment effects of cognitive changes in dementia.	Meta analysis based on meta regression	Search for articles, clinical trials and meta analysis done on Medline/ pubmed. Cochrane library, SCOPUS and Airiti library databases	Symptomatic treatment of cognitive symptoms of dementia is most effective management tool	Further research on causes of dementia warranted.	Level I

edu/10.1007/s00213-018-4867-y						
Ray, K. D., & Götell, E. (2018). The use of music and music therapy in ameliorating depression symptoms and improving well-being in nursing home residents with dementia. *Frontiers In Medicine,* 5, 287. https://doi.org/10.3389/fmed.2018.00287	To show the influence of CNA led music programs among dementia patients.	Exploratory design, dementia patients were their own control to measure the effect of music on depression and wellbeing. The MIDAS was used to capture well being.	Music therapists administered 2-weeks of music therapy, offered a three day training to CNAs. The CNAs conducted 2-weeks of music activities, singing and music-with-mov	Music therapy significantly decreased depression symptoms and while symptoms began to increase 2 weeks following music therapy, stabilized when	Training caregivers in nursing homes to implement music is prudent since music therapists are not available to implement therapy on a continuum. .	Level II

			ement, for 62 nursing home residents with moderate dementia. Depression was measured using the Cornell Scale for Depression.	CNAs added singing and music-with-movement to their caregiving activities		

Shelton, E. G. (2018). Development and evaluation of a personalized music intervention for dementia (Doctoral dissertation, *Cleveland State University)*. http://rave.ohiolink.edu/etdc/view?acc_num=csu1547483058896284	Evaluation of a personalized music intervention for dementia	Randomized controlled study with pre and post test	After listening to novel music for one month, the control condition participants were given the option of changing to a personalized playlist following post-test assessments	Positive outcomes were noted in anxiety and relationship strain. Behavioral symptoms of dementia may be reduced during listening and/or immediately following listening	Personalized music intervention is a low cost therapy that can benefit dementia patients in the community.	Level IV

Shiltz, D. L., Lineweaver, T. T., Brimmer, T., Cairns, A. C., Halcomb, D. S., Juett, J., Beer, L., Hay, D. P., & Plewes, J. (2018, January 1). "Music First": An alternative or adjunct to psychotropic medications for the behavioral and psychological symptoms of dementia.	To study the effectiveness of music therapy in managing the behavior changes in patients with dementia	An experimental study on nursing home residents in a dementia unit.	A 5-month prospective, naturalistic, interprofessional, single-center extended care facility study compared usual care (45 residents) and usual care combined with at least thrice weekly personalized ML sessions (47	The agitation levels of ML residents receiving antipsychotic drugs were comparable to those of ML patients receiving usual care and those of ML patients not prescribed antipsychotics	Additional research is needed to determine how tailored music programs impact the dosages and frequency of antipsychotic medications and their related risk of death and cerebrovascula	Level IV

GeroPsych, *31*(1), 17–30.			residents) to determine the influence of ML.		r events among this population	
Skingley, A., McCue, J., & Vella-Burrows, T. (2020). Using music interventions in the care of people with dementia. *Nursing standard (Royal College of Nursing* (Great Britain) : 1987), 35(6), 55–60.	Explores the evidence-based use of music in dementia care and outlines its potential benefits.	Literature review of evidence based articles on use of music for dementia	Reviews different types of music presentations and the outcomes to dementia patients.	Nurses are open to the use of music for dementia patients because it helps them connect with the patients,	Music has potential to improve cognitive, behavioral and psychosocial wellbeing, as well as an ability to improve the	Level V

https://doi.org/10.7748/ns.2020.e11560					experience of carers.	
2018 Alzheimer's disease facts and figures. (2018). *Alzheimer's & Dementia,* 14(3), 367–429.	To illustrate the figures and numbers of Alzheimer's and dementia.	Periodical/Report	Data collected from US data related to Alzheimer's and dementias	Alzheimer's and dementia numbers will grow in coming years	Expansion of care is necessary to detect dementia in mild stages to mitigate decline	Level VII

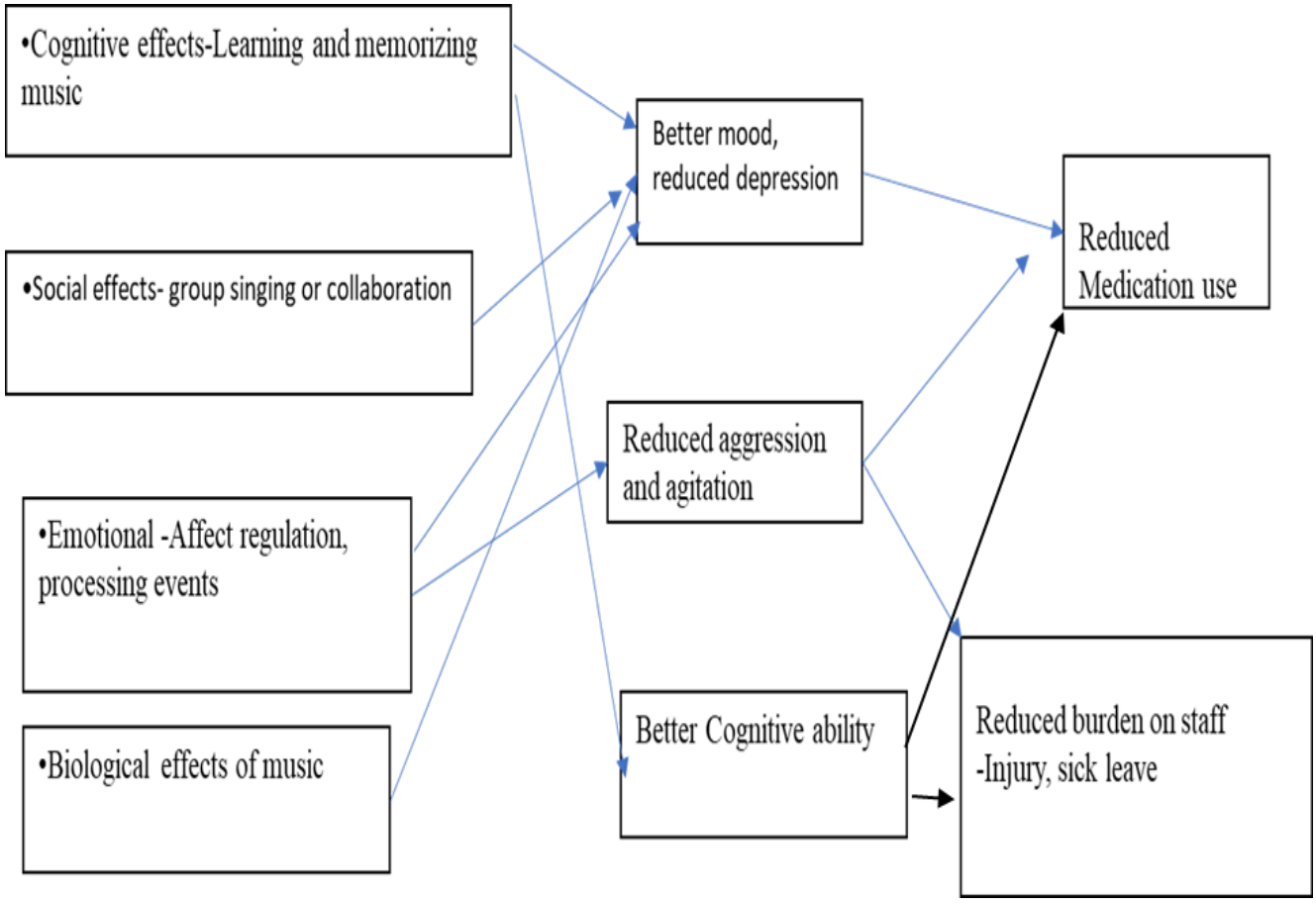
Trainor, H. (2019). Effects of using music therapy for patients suffering from dementia. The *Health Care Manager*, 38(3), 206-210. DOI: 10.1097/HCM.0000000000000276	To discuss mental and physical effects of music therapy on dementia patients	Literature review of the literature of the effects of music therapy on dementia patients.	Databases on EBSCOhost and Google Scholar were searched. Key websites that aided in the search for information were www.music therapy.org, www.alz.org, www.cms.gov, http://www.ilcuk.org.uk/, and	Music therapy has effects on staff and family members who share the experience with patients. They report feeling more energized, relaxed and uplifted after the sessions.	As music is seen as a newer remedy compared to pharmaceuticals, there is need for more research to promote its use.	Level V

			www.musicalbridgesmt.com.			
Wang, S., & Agius, M. (2018). The use of music therapy in the treatment of mental illness and the enhancement of societal wellbeing. *Psychiatria Danubina*, 30(suppl. 7), 595-600.	To investigate the effect of music on mental illnesses including depression, anxiety, schizophrenia, sleep disorders,	Systematic review of music therapy practice and outcomes.	98 papers were identified, of which 35 reported research findings.	Receptive music therapy (that is, listening to music) could reduce agitation, behavioral problems, and anxiety in older people with dementia, and it appears to be	Singing appears to be a helpful adjunct in treating all these ailments, and it also tends to aid in the bonding of mothers and children within	Level I

	and dementia.			more effective than interactive music therapy families.		
Watt, J. A., Goodarzi, Z., Veroniki, A. A., Nincic, V., Khan, P. A., Ghassemi, M., ... & Straus, S. E. (2019). Comparative efficacy of interventions for aggressive and agitated behaviors in dementia: a systematic review and network meta-analysis.	To compare pharmacologic and nonpharmacologic intervention in treating adults with dementia	A systematic review and meta-analysis of randomized control trials. .	The databases MEDLINE, EMBASE, Cochrane Central Register of Controlled Trials, CINAHL, and PsycINFO were searched for	Analysis of interventions targeting aggression and agitation showed that multidisciplinary care: massage and touch therapy , and music	Non-pharmacologic interventions like music therapy are more efficacious than the use of drugs to reduce agitation and aggression in	Level I

Annals of Internal Medicine, 171(9), 633-642. https://doi.org/10.7326/M19-0993				combined with massage and touch therapy were clinically more efficacious than usual care.	the elderly with dementia.	

Appendix C: FISHBONE DIAGRAM



Appendix D: SWOT ANALYSIS FOR MUSIC THERAPY

Strengths · It can help reduce anxiety and depression · Help maintain speech and language. · It soothes and is helpful at the end of life. · It enhances the quality of life. It has a positive impact on those involved in their career to improve their health.	**Weaknesses** · Many nursing staff not very knowledgeable on use of music . Cost of training staff members . Ineffective in those with hearing problems · Excessive music can cause hearing damage. · Can cause overstimulation · Trigger memory and can make the dementia patient remember stressful events.
Opportunities **.** Nursing staff including nurses and CNAs can easily administer · It can be used in wide settings, for instance, including it as a home management remedy · Counselors and Psychiatrists can use it in their management · Cheap method of management of mental problems. · Minimal side effects	**Threats** · Addiction to the therapy · Ineffectiveness in the absence of psychotropic drug therapy · Low response to the therapy. · No lasting effect in absence of continued therapy

Appendix E: GANTT CHART

Project **Activity/Time**	June	July	Aug	Sept	Oct	Nov	Dec
Create GANTT chart and WBS							
Create a Logic Model							
Update PICO/goals							
Create a policy							
Create powerpoints							
Send document to Project chair for evaluation							

Update documents							
IRB proposal							
IRB amendments							
Submit IRB application							
IRB application Amendments							
IRB Approval							
Policy Creation							
Send Project Document to Participants for Evaluation							
Receive Feedback and recommendations							

Implement Changes to Policy and write Final Policy Recommendation							

Appendix F: Work Breakdown Structure

LEVEL 1	LEVEL 2	LEVEL 3
	1.1 Initiation	1.1.1 Discuss project with chair 1.1.2 Project Review
	1.2 Planning	1.2.1 Preliminary scope determination 1.2.2 Project Plan Meeting 1.2.3 Plan development Development 1.2.4 Project Plan submission
	1.3 Execution	1.3.1 Project Start Meeting 1.3.2 Requirements verification/validation 1.3.3 Approvals/signed
	1.4 Implementation	1.4.1 Project Policy development 1.4.2 Project Status Meeting 1.4.3 Update policy 1.4.4 send policy to experts for Appraisal
	1.5 Analysis	1.5.1 Lessons from Project 1.5.2 Update documents

Appendix G: LOGIC MODEL

Logic Model Visual Representation

Inputs	**Outputs**		**Outcomes Impact**		
DNP timeline and curriculum **Time invested by**: Project Leader Project Chair **Constraints:** Time frame Changing Project focus	**Activities** Data literature review Develop policy Develop PowerPoint presentation	**Participation** Project Leader Professional Experts	**Short** Increase facility awareness on non-pharmacological interventions for aggression	**Middle** Decrease patient use of antipsychotic medications Staff and caregiver behavior modification Reduce rehospitalizations Decrease in cost of care	**Long** Reduce staff/caregiver distress Reduce staff/caregiver injuries Reduce frequency/duration and severity of

	Evaluation of policy by expert team Review policy based on professional feedback				aggression episodes Increase patients quality of life

Threats: Knowledge deficit,lack of resources, lack of time, lack of equipment.	Assumptions: Nurses are willing to be part of music programs. Music will have positive effects on patients, Healthcare facilities are open to implementing music programs for patients.

APPENDIX H: HEALTH POLICY

Lydia Houska

RN, FNP DNP Student

The College of Saint Scholastica

A Health Policy for The Management of Neuropsychiatric Symptoms in Dementia Patients

Title: **Increasing Staff Awareness of Music Efficacy for Neuropsychiatric Symptoms in Dementia Patients by Utilizing MIDAS.**

Audience: **Psychiatrists, Nurse managers, Case Workers, social workers, Registered Nurses, Academic Personnel and Policy makers.**

SITUATION SUMMARY

- According to CDC (2022), over 5.8 million individuals in the USA are living with dementia.
- Population with dementia is projected to grow to estimated 150.8 million globally by 2050 (Nichols et, al. 2022)
- Music therapy can help minimize neuropsychiatric symptoms in dementia persons (Baker et al., 2022). Symptoms like depression, anxiety, and agitation can be greatly reduced with regular music therapy sessions.
- Neuropsychiatric symptoms can be very difficult to deal with, and they often lead to increased levels of stress and anxiety for caregivers (Holden et al., 2022).

- Nursing staff should be educated and supported to use the MIDAS tool to assess dementia patients and identify those who are responsive to music therapy.
- Stakeholders are encouraged to promote music as a safe tool to manage neuropsychiatric symptoms for people with dementia.

BACKGROUND

Music therapy for dementia

- Music has been shown to activate areas of the brain that are typically impacted by Alzheimer's disease and other forms of dementia (Nichols et al., 2022).
- Music therapy has emerged as a promising intervention for neuropsychiatric symptoms associated with dementia, yet little is known about staff awareness or perceptions of its efficacy (Amano et al., 2022).
- Music is an efficient treatment for reducing neuropsychiatric symptoms in dementia patients, including anxiety, depression, aggression, and apathy (Ibenthal et al., 2022).
- Music therapy has been linked to a reduction in the utilization of antipsychotic medication in dementia patients (Ridder et al., 2013).
- Music therapy improved the lives of caregivers and patients (Bufalini, et al., 2022, González-Ojea et al., 2022).

Music In Dementia Assessment Scales (MIDAS)

- MIDAS is designed to assess dementia patients' response to music and identify those who can benefit from music therapy.
- MIDAS uses Visual Analogue Scales (VAS). Each VAS comprises 100mm line without intervals. The two extremes are labeled "none at all" and "highest".

- The current policy will utilize a five-point Likert scale to measure patient response. The measures are:1 Never, 2 Rarely, 3 Occasionally, 4 Frequently, 5 Always. A total of the tally will be multiplied by a hundred for a maximum total of five hundred.
- To evaluate a person's response to music, an initial score is obtained by a caregiver without patient exposure to music.
- A beginning score is obtained within the first five minutes after exposure to music by a different scorer.
- A third score is obtained during what is perceived to be the five most clinically significant minutes during the music therapy session and a final score is obtained hours after the music session.
- A declining MIDAS score over time would indicate a lack of benefit from music therapy.
- If a patient sleeps during the session, the scorer will skip question one to six and answer question seven only (McDermot 2018).

ASSESSMENT

- There is a growing body of evidence that suggests that music can be an effective intervention for neuropsychiatric symptoms in dementia patients (Ibenthal et al., 2022; Alexio et al., 2022).
- Many staff members working in dementia care facilities are not aware of this research and as a result, are not using music as a way to help manage these symptoms (Ekra & Dale, 2020).
- Many doctors and nurses are not aware of how music can help to improve the mood and cognitive abilities of their patients (Ekra & Dale, 2020).
- Many healthcare facilities do not have any policies on the use of music therapy as an intervention for patients.

- Many healthcare workers use their own judgment and initiative to offer patients music therapy.
- Music intervention was associated with significant improvements in anxiety, depression, and apathy in dementia persons (Leggieri et al., 2019).
- Music therapy was linked to a reduction in the utilization of antipsychotic medication in dementia patients (Ridder et al., 2013).
- Music therapy can help to improve mood, communication, and social interactions. It can also help to reduce anxiety and agitation.
- Music can provide a cognitive and emotional anchor for patients who may be struggling with memory loss and confusion.
- Music can help to reduce the burdens on caregivers by providing them with another tool to help manage difficult behaviors
- Music therapy is a low-cost intervention that can provide significant benefits for dementia patients.
- The following are the MIDAS assessment criteria:

I. Levels of Interest in objects/activities/people around him/her (attention). For example:

Did he/she show interest in an activity or other people around him/her?

Did his/her posture or facial expression change if activities or music caught his/her attention?

Did he/she become animated if activities or music caught his/her attention

II. Levels of Response in communication/activity (awareness, interaction). For example:

Did his/her facial expression or body-movements indicate his/her awareness of staff or therapist?

Did he/she make eye-contact with staff, therapist, or other group members?

Did he/she join in conversation; music making or make vocal sound?

III. Levels of Initiation in communication/activity (intention). For example:

Did he/she try to communicate with staff, therapist or other group members?

Did he/she start conversation, start music making, or initiate vocalization?

Did he/she talk about his/her life experiences (reminiscence) or mention music meaningful to them?

IV. Levels of Involvement in communication/activity (participation). For example:

Did he/she become engaged in conversation, music making, or any form of communication?

Did he/she show enthusiasm in activities that interest him/her?

V. Levels of Enjoyment during communication/activity. For example:

Did he/she smile, laugh, or show a brighter mood?

Did he/she show playfulness, sense of humor?

Was he/she relaxed?

RECOMMENDATION

- The MIDAS assessment tool will inform the treatment team of the therapeutic response of dementia patients to music exposure.
- This is a policy recommendation and execution in a patient care setting would be an implementation project on its own.
- Music therapists would educate nursing staff on the adoption of the MIDAS in patient care units.
- Nurse managers and mental health providers would use MIDAS score to recommend music for patients who have responded positively to music therapy.
- An improving score during different rating sessions would indicate the person is responsive to music therapy.
- A consistently declining score over weeks could be an indication the person is not benefitting from the intervention.
- Each patient’s optimal level is different, and raters should consider patients' dementia progression.
- Having regular raters is important due to the subjective nature of the MIDAS tool to maintain consistency on scoring.
- Nursing staff and music therapists to follow through and ensure a providers order is written to ensure consistent music therapy is provided to identified patients.
- A dedicated space for music therapy sessions should be set up and ensure there is always someone available to lead them.

- Establish a music therapy program specifically for dementia patients. This will ensure that the music therapy is tailored to their needs and that they are receiving the most benefits from the therapy.

- Keep track of the patients' progress with music therapy. This will help to determine whether or not the therapy is effective for each individual patient and whether or not it is helping to improve their symptoms.

- Evaluate the efficiency of the music therapy program on a regular basis. This will help to ensure that it is continuing to be beneficial for the patients and that any changes that need to be made are made in a timely manner.

- Encourage family members and friends to bring in musical items from home that their loved ones can enjoy during their stay at the facility.

- Make CDs or MP3 files available of calming or relaxing music that can be used during times of stress or agitation.

- Keep up to date with research on music therapy and dementia care and be sure to share any new findings with staff on a regular basis.

Appendix I: AGREE II: Experts Policy Evaluation Form

Based on your professional expertise, please answer the following questions regarding this evidence-based practice policy recommendation for increasing staff awareness of music therapy for BPSD.

Domain Item AGREE II Rating

1 Strongly disagree 2 Disagree 3 Neutral 4 Agree 5 Strongly Agree

Scope and purpose

1. Do you feel the overall objective(s) of the guideline is (are)clear.

Strongly disagree____ Disagree____ Neutral____ Agree____ Strongly Agree____

2. Do you feel the purpose of music therapy for BPSD in dementia patients(s) covered by the guideline is (are) clear.

Strongly disagree____ Disagree____ Neutral____ Agree____ Strongly Agree____

3. Do you feel the population (patients, public, etc.) to whom the guideline is meant to apply is clear.

Strongly disagree____ Disagree____ Neutral____ Agree____ Strongly Agree____

Stakeholder involvement

4. Do you feel the guideline includes individuals and stakeholders that you feel are relevant for this policy?

Strongly disagree____ Disagree____ Neutral____ Agree____ Strongly Agree____

Rigor of development

5. Do you feel the methods for formulating the recommendations are clearly

described.

Strongly disagree____ Disagree____ Neutral____ Agree____ Strongly Agree____

6. Do you feel the health benefits, side effects and risks were considered in formulating the guideline?

Strongly disagree____ Disagree____ Neutral____ Agree____ Strongly Agree____

Clarity of presentation

7. Do you feel the recommendations are specific and unambiguous?

Strongly disagree____ Disagree____ Neutral____ Agree____ Strongly Agree____

Applicability

8. The guideline describes facilitators and barriers to its application.

Strongly disagree____ Disagree____ Neutral____ Agree____ Strongly Agree____

9. Do you feel the guideline provides advice and/or tools on how the recommendations can be put into practice.

Strongly disagree____ Disagree____ Neutral____ Agree____ Strongly Agree____

10. Do you feel the guideline presents monitoring and/ or auditing criteria?

Strongly disagree____ Disagree____ Neutral____ Agree____ Strongly Agree____

Overall Guideline Assessment

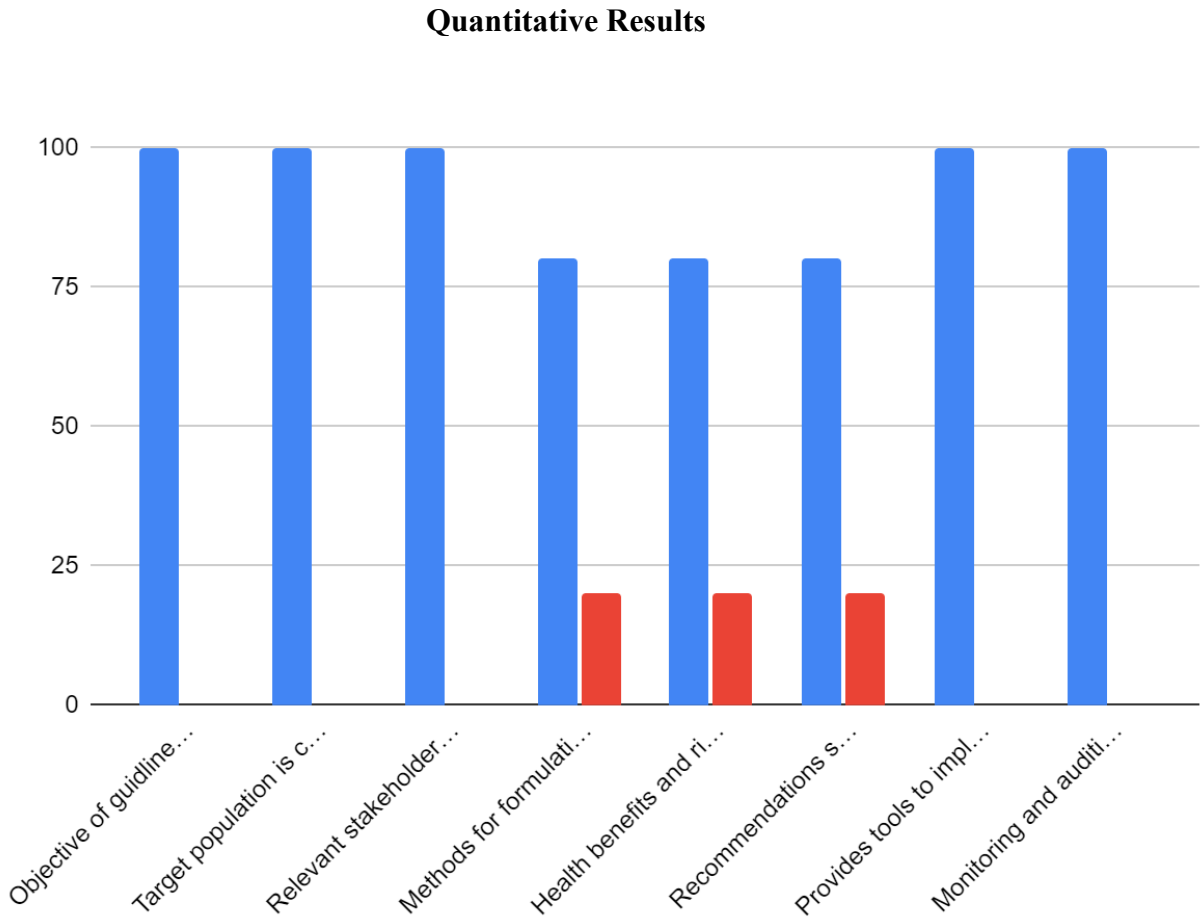
11. Would you recommend this guideline for use?

Yes ☐

Yes, with modifications ☐

No ☐

APPENDIX J: RESULT BAR GRAPH AND PIE CHART

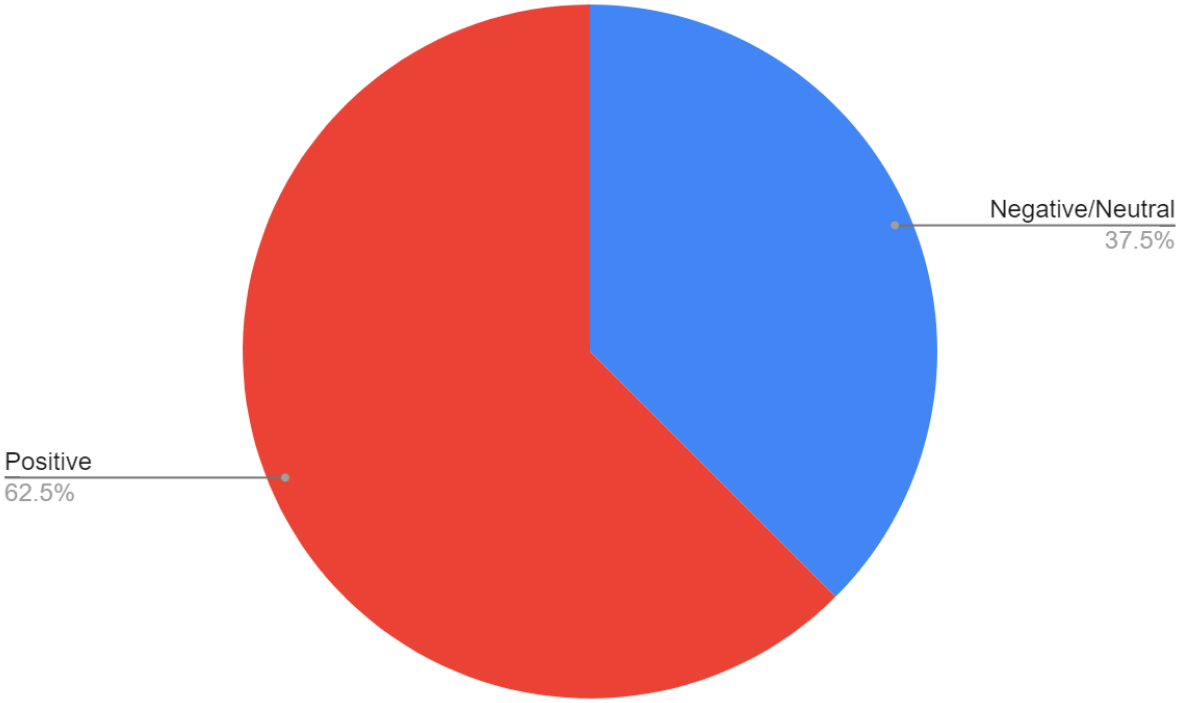


Key:

Strongly Agree

Agree

Qualitative Results



Would you recommend this guideline for use?

“ Yes, It's a good and relevant policy recommendation that could apply to many populations not just dementia”

“Yes, This is a wonderful guideline for the geriatric unit. It works both ways because it can also identify people who don’t benefit from music. Staff might have a lot of trouble tabulating 100 mm, is there a simpler way to measure the response?”

“Yes, Having a personalized way of offering music would be beneficial. I don’t think many facilities use any tools to gauge patients' appreciation. Facilities may push back on training staff and the evaluation measure could be simpler. Maybe use a shorter Likert format instead of the 100 mm ruler.”

Appendix K: Project Communication Matrix

Project Members: Lydia Houska

Project Organization/Agency: The College of Saint Scholastica

DNP Project Approval From Link:

Project Champions (2 required, include initial contact date):

Project Start Date: **June 2022**

Projected Date of Project Completion**:** **Dec, 2022**

Project Charter: Make copy, edit and keep updated. (This is your way of communicating what you are doing. It will keep you focused!) The purpose of this document is for students, faculty Chair's and stakeholders.

Contact Information

Team member Name	Location /Time Zone	Phone Number	Email/Tweet	Communicate Best Via	Project Lead Role
Lydia Houska	Central	612-805-8931	lhouska@css.edu	Email	

Add Individual and Team-Decided Deadlines, as well as Project Member Expectations. Students will be required to update this DNP Project Action Plan prior to meeting with your Project Chair as this document will serve as an informational guide to the project process through its evolution.

(deadline dates and or revisions can vary/change as needed with proper group communication)

Project Communication Matrix

Stakeholder Communication Sheet Link - Communicate with project stakeholders twice per semester minimally. See these meeting guidelines for agenda formation.

Team Members: Lydia Houska

Project Chair: Dr Christopher Kemnitz

Project Title: Policy Proposal to Increase Staff Awareness of Music Efficacy in Management of BPSD

D #	Purpose/Objectives	Method Of Communication	Frequency	Recipients	Person Responsible	Notes
1	Recruit experts in the field	Email/call			LH	
2	Project proposal	Google docs/zoom			LH	
3	IRB Proposal	Google doc/zoom			LH	
4	Send policy proposal	Email		Evaluators	LH	
5	Receive feedback	Email			LH	
6	Send back policy with updates per evaluators recommendations	Email		Evaluators	LH	

Part of a team/Group? Complete the DNP Group Project Peer Evaluation form (make copy visible to Chair only). Place a link to the form here, titled with your name.

Project Chair's Recommendations

Date of Meeting	Topic of Discussion	Action Recommended	Date to be actioned by	Action Complete

				d X
6/23/2022	Identifying tools to measure, policy recommendation,	Look for tools that can appraise staff understanding of policy		
79/2022	IRB application, paper, 3MT, expert appraisal tool	Update introduction to paper, record 3MT		
7/25/2022	IRB application form details, formatting paper	To edit paper per chair's recommendations		
10/17/22	Submitted Policy to Project chair	Send to evaluators and work on feedback		
11/10/2022	Updates on paper, review policy,	To update paper and input new changes to policy		

Appendix L: DNP Project Poster

Policy Recommendation to Increase Staff Awareness of Music Benefits in Managing Neuropsychiatric Symptoms of Dementia.

Lydia Houska
The College of St Scholastica
Department of Graduate Nursing
Advisor: Dr Christopher Kemnitz
DNP PROJECT POSTER

Problem Statement
5.8 million Americans live with dementia
Projected 150 million worldwide will have dementia by 2050
Currently medications in use not effective
Music has shown benefits to neuropsychiatric behaviors related to dementia
Most nursing staff use own judgement in administering music due to lack of education on it and lack of relevant policies.

Methods
Policy initially developed based on information gathered in the literature review and analysis process.
A policy evaluation form based on the AGREE II form was formulated for the expert evaluators
Calls and emails were made to the five evaluators
Policy was sent out to evaluators and feedback received
A review of the policy recommendation completed based on the evaluators feedback

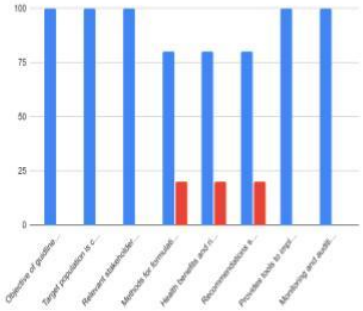
Discussion
Strong support for the policy recommendation
Experts agreed on the utilization of the MIDAS tool
Experts agreed on the benefit of using the MIDAS tool and music for dementia care.

Guiding Frameworks
Gerdner's mid-range theory of individualized music

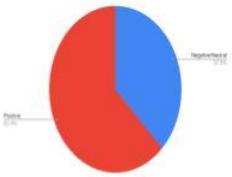
Results
83 % of the experts made their first evaluation
100 % of the experts made their second evaluation
100% of the experts gave valuable feedback on the policy

Conclusion
Use of the MIDAS tool to assess dementia patients' suitability for music therapy will increase staff awareness of music efficacy to the dementia patient.

Quantitative Results



Qualitative Results



References

Health Policy

Appendix M: 3MT