

2020

Improving Effective Pain Assessment and Management in Elderly Patients

Omotola A. Adebayo
Walden University

Follow this and additional works at: <https://scholarworks.waldenu.edu/dissertations>



Part of the [Family, Life Course, and Society Commons](#)

This Dissertation is brought to you for free and open access by the Walden Dissertations and Doctoral Studies Collection at ScholarWorks. It has been accepted for inclusion in Walden Dissertations and Doctoral Studies by an authorized administrator of ScholarWorks. For more information, please contact ScholarWorks@waldenu.edu.

Walden University

College of Health Sciences

This is to certify that the doctoral study by

Omotola Adebayo

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

Review Committee

Dr. Mary Martin, Committee Chairperson, Nursing Faculty

Dr. David Sharp, Committee Member, Nursing Faculty

Dr. Eric Anderson, University Reviewer, Nursing Faculty

Chief Academic Officer and Provost

Sue Subocz, Ph.D.

Walden University

2020

Abstract

Improving Effective Pain Assessment and Management in Elderly Patients

by

Omotola Aduke Adebayo

MSN, Emory University, 2012

ASN, Kennesaw State University, 1997

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

May 2020

Abstract

Inadequate management of pain is common in the elderly, and the negative implications are often profound. Untreated pain has been associated with negative consequences such as depression, anxiety, sleep disruption, weight loss, and limitations in the performance of daily activities and functions. The purpose of this educational project was to improve the assessment and management of pain of elderly patients residing in long-term care facilities (LTCFs). The project question examined the effects of staff education on the nursing staff's knowledge of pain assessment and management. Nonlicensed personnel are at the forefront of providing direct patient care in LTCFs. Knowles's theory of adult learning was used to guide the educational strategies for this project. A convenience sample of 24 nursing staff participated in a 30-minute interactive discussion about pain assessment and management training. A pre- and post-knowledge assessment was conducted using a 17-question, 5-point Likert scale survey on self-assessment of knowledge in assessing pain in elderly patients. Data analysis was conducted using a paired *t* test to compare pre- and post-intervention outcomes for participants. The *t* test revealed that the mean pretest ($M=52.98$) was significantly different from that of posttest ($M=80.83$), $t(23) = -6.570$, $p < 0.001$. These data suggested that the intervention significantly increased the knowledge. A need for pain management continuing education was identified. Implications for positive social change for nursing staff include an increase in knowledge in the area of pain assessment and management. This project can help improve the quality of life of elderly patients by preventing the negative consequences of untreated pain.

Improving Effective Pain Assessment and Management in Elderly Patients

by

Omotola Aduke Adebayo

MSN, Emory University, 2012

ASN, Kennesaw State University, 1997

Project Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Nursing Practice

Walden University

May 2020

Dedication

With deep gratitude to God almighty, the giver of life and all things good, this project is dedicated to:

My husband and life-long friend, Akanmu G. Adebayo, for his love, support, and encouragement. Thank you for providing the shoulder to cry on each of the numerous times I hit bumps in the road during this DNP journey;

My mum, Mrs. Jolaade Olofinboba, for providing the educational foundation on which the DNP is built. Thank you for your prayers and unshakable faith in me to complete the DNP journey; and

My grandchildren, Alexander, Arya, Aliza, and Aaron Schumann, for bringing so much joy to my life.

Acknowledgments

I wish to express my gratitude to Dr. Mary Martin, my DNP committee chair, for her encouragement and guidance throughout this journey; to Dr. David Sharp, my second committee member, for taking the time to review my proposal and providing valuable feedback on my project; and Dr. Eric Anderson, the University Research Reviewer, for all his assistance. I also wish to thank Dr. Diane Whitehead for helping me to navigate a major roadblock during the journey; I will forever be grateful. Many thanks to Ms. Bridgette Malchow, my Student Success Advisor, for the reassurance that there is a light at the end of the tunnel.

I would like to thank my preceptor, Dr. Marilyn Whitening, for her mentorship, guidance, and support, and for providing opportunities for me to complete my DNP project.

I would like to thank the facility director and the participants in the project for their support of the project implementation.

Table of Contents

List of Tables	iv
List of Figures	v
Section 1: Nature of the Project	1
Introduction.....	1
Problem Statement.....	3
Purpose Statement.....	4
Project Question.....	5
Nature of the Doctoral Project	5
Significance.....	6
Implications for Social Change.....	7
Summary.....	8
Section 2: Background and Context	9
Introduction.....	9
Theoretical Framework.....	9
Relevance to Nursing Practice	11
Prevalence of Pain Among the Elderly.....	11
Factors Contributing to Undertreatment of Pain.....	12
Methods of Assessing Pain	13
Effects of Staff Education.....	14
Local Background and Context	16
Role of the DNP Student.....	16

Summary	17
Section 3: Collection and Analysis of Evidence.....	19
Introduction.....	19
Practice-Focused Question.....	19
Evidence Generated by the Doctoral Project.....	19
Participants.....	19
Procedures.....	20
Protections.....	20
Data Analysis and Synthesis.....	20
Summary.....	21
Section 4: Findings and Recommendations.....	22
Introduction.....	22
Findings and Implications.....	22
Recommendations.....	39
Strengths and Limitations of the Project.....	39
Section 5: Dissemination Plan.....	41
Analysis of Self.....	41
Summary.....	42
References.....	43
Appendix A: Invitation to Participate.....	51
Appendix B. Permission to Use Instrument.....	52
Appendix C: Education Program.....	54

Appendix D: Self-Assessment of Knowledge in Assessing Pain in Elderly Patients.....57

List of Tables

Table 1. Alignment of Adult Learning Theory With Project	10
Table 2. Participants' Job Title	23
Table 3. Number of Years in Nursing Profession	25
Table 4. Number of Years in Long Term Care.....	26
Table 5. Participants' Education Level	28
Table 6. Likert Scale Options Used in the Project	29
Table 7. Summary of Data Analysis	30
Table 8. Paired Samples Statistics for Self-Assessment of Knowledge in Assessing Pain in Elderly Patients.....	31
Table 9. Paired Samples Test for Self-Assessment of Knowledge in Assessing Pain in Elderly Patients	31
Table 10. Pretest: Participants' Responses	33
Table 11. Posttest: Participants' Responses	34
Table 12. #1 Mean Pretest and Posttest "Older People Experience Pain Less Intensely Than Younger People"	35
Table 13. #1 Likert Scale Responses "Older People Experience Pain Less Intensely Than Younger People	36
Table 14. #15 Likert Scale Scores "Pain is a Part of the Aging Process"	37
Table 15. Correct and Incorrect Responses by Statement	38

List of Figures

Figure 1. Participants' job title	24
Figure 2. Number of years in nursing profession	25
Figure 3. Number of years in long term care	27
Figure 4. Participants' education level	28
Figure 5. Summary of data analysis	29
Figure 6. Mean scores of the pretest and posttests	32
Figure 7. #1 Mean pretest and posttest "older people experience pain less intensely than younger people"	36
Figure 8. #1 Likert scale responses "older people experience pain less intensely than younger people"	37
Figure 9. #15 Likert scale scores "pain is a part of the aging process"	38

Section 1: Nature of the Project

Introduction

Pain is a common problem among older adults living in long term care facilities (LTCFs). It is defined by the International Association for the Study of Pain (IASP) as “an unpleasant, sensory and emotional experience that is associated with actual or potential tissue damage” (IASP, 2014, para 1). It is a subjective experience for which there is currently no objective biological marker. A thorough pain assessment in community-dwelling older adults is a crucial aspect of comprehensive, quality care delivery. This is because an inadequate assessment of pain results in its undertreatment. If left untreated, pain can interfere with quality of life. According to Resnick et al. (2019), untreated or undertreated pain has been linked to individuals’ overall satisfaction with life.

Pain can be acute or chronic. Acute pain is usually associated with injury, illness, surgery, or infection. It serves a biological purpose of protecting against tissue damage. Noroozian, Raeesi, Hashemi, Khedmat, and Vahabi (2018) explained that the location and cause of acute pain can be identified easily, and it is expected to diminish as the injury heals. In contrast, chronic pain serves no biological purpose. Ellis, Wells, and Ong (2019) proposed that chronic or persistent pain results when acute pain is not properly assessed and managed.

Inadequate management of pain is found to be common, and the negative implications can be profound. Resnick et al. (2019) found that negative clinical outcomes resulting from ineffective pain management include mood and behavior disorders as well

as decreased activity. In addition, Alderman, Soulsby, Ward, and Bisiani (2018) asserted that chronic pain is associated with enormous economic impact and considerable healthcare service utilization burden.

Researchers have indicated that the barriers that lead to the undertreatment of pain include factors related to health care providers as well as to the patients themselves (Veal et al., 2018). Numerous researchers have found inadequate pain assessment to be a factor in pain undertreatment in older adults (Kang & Demiris, 2018). Factors influencing nursing pain assessment, according to Veal et al. (2018), include knowledge deficit and inadequate pain assessment. The absence of formal assessment procedures has also been identified as a contributing factor (Schofield, 2016). Barriers to adequate pain management in older adults include memory or sensory impairment, cognitive decline, and fear of addiction (Veal et al. 2018).

The management of pain must incorporate a pain assessment tool for proper assessment and appropriate treatment. These tools help to standardize pain measurement by quantifying pain intensity (Veal et al. 2018). Several pain assessment tools are available that can be used to identify the intensity and behaviors associated with pain. The tools include the Visual Analogue Scale, Numerical Rating Scale, Verbal Descriptor Scale, the Wong-Baker smiley faces, and a Numerical Descriptor Scale (Kang & Demiris, 2018). Kang and Demiris (2018) identified other tools including the Iowa Pain Thermometer, the short form Brief Pain Inventory, and the Geriatric Pain Measure (GPM). They found that the GPM and the Geriatric Painful Events Inventory were designed specifically for older adults (Kand & Demiris, 2018). For patients with

dementia, Kang and Demiris suggested other tools that consider a combination of physical and behavioral aspects, such as mobility, appetite, sleep pattern, facial expression, and body language.

Problem Statement

The problem that was addressed by this project is the lack of knowledge about pain management among nurses and nonlicensed personnel (NLP) contributing to the inadequate assessment of pain in older adults. Ineffective pain management can lead to adverse consequences for patients (Resnick et al., 2019). Researchers have suggested that chronic pain in the elderly presents challenges to healthcare professionals because of the presence of comorbidities (Schofield, 2016). In their review of existing literature, Alamdari and Lagana (2015) noted the comorbid relationships of pain to depression and posttraumatic stress disorder. The presence of comorbidities, according to Furjanic, Cooney, and McCarthy (2016), makes the older adults more vulnerable to pain. Park, Park, and Park (2016) noted that healthcare professionals tend to assume that growing old results in experiencing inevitable physical deterioration and pain. Researchers have also demonstrated that elderly patients are sometimes reluctant to report pain due to the assumption that healthcare professionals “know best” (Clarke, Martin, Jones, Schofield, & Anthony, 2014). To effectively assess and manage pain in the elderly, LTCFs need a pain management protocol that includes knowledgeable nursing staff and NLP. The protocol should also include patient-centered care, which improves treatment implementation and outcomes (Paul-Savoie, Bourgault, Potvin, Gosselin, & Lafrenaye, 2018).

One of the important elements of patient-centered care is patients' satisfaction with care (Paul-Savoie et al., 2018). The Joint Commission (2018) maintained that pain is a major cause of patient dissatisfaction with healthcare and reported that effective July 1, 2019, "new and revised pain assessment and management standards will apply to the Joint Commission-accredited nursing care centers" (p. 1). The Joint Commission established program-specific standards for LTCFs to promote quality initiatives and allocate resources for safe pain management, including educational resources for staff to improve pain assessment and management. The focus of this project was on increasing the awareness of staff about pain to narrow the pain knowledge gap and improve the quality of care delivered to elderly patients.

Purpose Statement

According to Molton and Terrill (2014), between 60% and 75% of older adults over 65 years report some persistent pain. The rate is markedly higher for people living in LTCFs (Molton & Terrill, 2014). Dogan and Goris (2018) found that the rate of the elderly living in pain to be 76.9%. The purpose of this project was to improve the assessment and management of the pain of elderly patients residing in LTCFs following an educational intervention for nursing staff.

It is imperative to address this practice problem because a thorough pain assessment and effective pain management in the elderly are critical aspects of quality care delivery. Researchers have found that pain educational interventions (PEIs) have positive effects on nurses' pain knowledge and behavior (Mędrzycka-Dąbrowska, Dąbrowski, Gutysz-Wojnicka, Basiński, & Kwiecień-Jaguś, 2018).

According to Bonkowski, De Gagne, Cade, and Bulla (2018), pain management education is often inadequate in nursing schools and students, therefore, lack knowledge of pain management basics. Dogan and Goris (2018) suggested regular, ongoing pain management education for LTCFs personnel to promote adequate pain management and enhance the quality of life of elderly residents. According to Schofield (2016), knowledge of pain management is a necessity for nursing staff.

Project Question

In this Doctor of Nursing Practice (DNP) project, I sought to answer the following question: Will implementing a staff education plan increase nursing staff's knowledge of pain assessment and management?

Nature of the Doctoral Project

The nature of this project was educational. The project took place at a LTCF located in the southeastern region of the United States. As the geriatric population of the United States continues to increase, many older adults move to assisted living or LTCFs (O'Hora & Roberto, 2018). Healthcare needs and the inability of the family to provide the care needed at home are some of the reasons why the elderly move into one of these facilities (O'Hora & Roberto, 2018). The facility selected for the project is an 82-bed LTCF. The facility was selected at the request of the director who stated that nursing staff needs training in pain management, based on the complaints she received from family members when they visited their loved ones. The facility had a nursing staff comprising of one registered nurse (RN), one licensed practical nurse (LPN), and 40 NLP. The RN was no longer working at the facility at the time of the project implementation. During

the visit to the project site, I interviewed the resident care coordinator as well as two NLPs. I was informed that there was no pain assessment tool in use at that time. Absence of a formal pain assessment procedure does not allow for an accurate assessment of pain, resulting in poor pain management and poor patient outcomes.

The goal was to improve the patient experience, leading to greater satisfaction. To achieve this goal, I aimed to create and implement a staff education plan regarding the importance of incorporating pain assessment into routine care and making an inquiry about pain at each patient encounter as well as how to correctly assess for pain. Nursing pain education is one of the solutions recommended for poor patient satisfaction (Glowacki, 2015).

Given that pain assessment in the geriatric population is complex, Damsgard et al. (2018) suggested that there needs to be a multidisciplinary approach in its diagnosis and treatment. The approach comprises interventional procedures, physical rehabilitation, pharmacotherapy, and psychological support (Damsgard et al., 2018). In this project, I focused on the assessment of the nurses' and NLP's ability to identify and manage pain in elderly patients.

Significance

Studies have shown that chronic pain is associated with depression and anxiety, both of which have comorbidities such “greater levels of stress and sleep disturbance” (Vadivelu et al. 2017, p. 174). The highest frequency of painful conditions is experienced by the geriatric population, but this is the group that receives the least successful pain management (Ellis, 2019). Dogan and Goris (2018) found that elderly patients

complained of pain mostly in the lower extremities (43.2%). Other researchers have similarly found that pain in older adults is mostly musculoskeletal and degenerative (Tse, Tang, Wan, & Vong, 2014). The most frequent types of pain reported include shoulder pain, neck pain, back pain, hip pain, knee pain, ankle pain, and multijoint pain (Tse et al., 2014). Inadequate assessment of pain results in its undertreatment.

Nonpharmacological interventions are effective in reducing pain in the long-term care setting (Ellis et al., 2019). In a study to evaluate a pain management program (PMP) using nonpharmacological approaches at five LTCFs, Ellis et al. (2019) found a small but statistically significant decrease in the number of as needed medication use. Ellis et al. also found a decrease in average pain ratings. The PMP included exercise and stretching, massage, transcutaneous electrical nerve stimulation (TENS) or any combination of these. The PMP was implemented by a physical therapist (Ellis et al., 2019). Tse et al. (2014) also found physical therapy to be of benefit to older adults with pain. In addition, Tse et al. found “significant improvements in the psychological measures regarding the change in happiness, life satisfaction, loneliness, and depression” (p. 786).

Implications for Social Change

It has been documented that pain has been “untreated or undertreated” in the United States LTCFs (Hunnicut, Ulbricht, Tjia, & Lapane, 2017). The quality of life of older adults with pain is significantly decreased and may result in an impaired ability to recover from various illnesses (Shahar, Mendelson, Gerbi, & Natan, 2018). According to Smith, Becker, Roberts, Walker, and Szanton (2016), there is a relationship between pain, depression, and functional ability. An expected change for nursing staff would be an

increase in knowledge in the area of pain assessment and management. A thorough pain assessment at each patient encounter can allow the care provider to provide appropriate care and treatment. This project can help improve the quality of life of elderly patients by preventing the negative consequences of untreated pain.

Summary

Untreated pain has been associated with negative consequences, such as depression, anxiety, sleep disruption, weight loss, and limitations in the performance of daily activities and functions (Smith et al., 2016). Efforts must be made to improve the quality of the healthcare delivery system by increasing patient safety, decreasing healthcare costs, and improving patient outcomes. Consistent pain assessment by staff at each encounter is vital to continuous quality improvement. The next section will address the background, context, and theoretical framework for this evidence-based project.

Section 2: Background and Context

Introduction

According to Arnstein et al. (2017), poorly managed pain can “harm an individual’s mind, body, spirit, and social interactions” (p. 21). Over 50% of older persons living in the community experience pain, which negatively impacts their quality of life (Clarke et al., 2014). The need to improve pain assessment and management in elderly patients residing in LTCFs has prompted me to address the following project question: Will implementing a staff education plan increase nursing staff’s knowledge of pain assessment and management? In this section, I present the theoretical framework, discuss the relevance to nursing practice, and examine the local background and context. I also discuss the role of the DNP student.

Theoretical Framework

Knowles’s theory (1980) of adult learning was used to guide the educational strategies for this project. Also known as andragogy, the theory emphasizes that the adult learner is independent and self-directing (Knowles, 1980). Andragogy is based upon six assumptions: (a) self-directedness, (b) need to know, (c) use of experience in learning, (d) readiness to learn, (e) orientation to learning, and (f) internal motivation (Chan, 2010). Table 1 aligns this theory with the education program.

Table 1

Alignment of Adult Learning Theory With Project

No.	Adult learning theory assumptions	Alignment with project
1	Self-concept – Adult learners are self-directed, and will seek new knowledge on their own.	The project site encourages the implementation of new evidence-based knowledge that will improve patient outcomes and enhance staff development and professional growth.
2	Need to know – As adult learners, nursing staff needs to know the value of effective pain assessment and management.	The project site does not have a formal pain assessment procedure. This new knowledge will assist staff to understand the importance of dealing with pain.
3	Experience – Long-term care facility nurses and NLP have years of experience that will help them in learning and retaining the newly acquired knowledge.	Staff’s experience is associated with certain preconceived notions and myths about pain in the elderly which needs to be changed.
4	Readiness to learn – As adults, nurses and NLP are ready to learn what they believe they need to know.	Studies have found change in a positive direction in the attitudes, subjective norms and intentions of nursing staff after pain education intervention.
5	Orientation to learning – Nursing staff will learn how to effectively assess and manage pain in elderly patients and will begin applying the newly acquired knowledge immediately in daily practice.	Education plan is greatly beneficial to staff assessment knowledge
6	Internal motivation – Includes earning of continuing education unit hours and the opportunity to participate in quality improvement endeavor.	The education program will allow the adult learner to develop new skills and contribute to quality improvement.

Relevance to Nursing Practice

The following databases were searched: ProQuest, CINAHL, MEDLINE, and Google Scholar through Walden University. Search terms included *assessment and management, elderly, prevalence, and staff education*. Also, internet searches were conducted of accreditation agencies such as The Joint Commission. Seventy-two peer-reviewed articles were identified within the years of 2014 and 2019. However, 15 articles were excluded because the studies were based on cancer treatment or opioid management. The literature supported the common themes regarding nursing education, pain assessment, pain management, and elderly.

Prevalence of Pain Among the Elderly

The lives of approximately 100 million Americans are affected by pain, costing hundreds of billions of dollars annually for treatment (Vadivelu et al., 2017). Clarke et al. (2014) noted that the prevalence of chronic pain increases with age and that many older adults believe pain to be “an expected consequence of later life” (p. 2). They believe that seeking help is not an option and continue to live with pain. A majority of community-dwelling older adults experience pain, which negatively impacts their quality of life (Clarke et al., 2014). Pain can exacerbate other geriatric conditions, such as falls, cognitive decline, deconditioning, malnutrition, gait disturbances, and slow rehabilitation (Crowe et al., 2017). According to Zwakhalen, Hamers, Peijnenburg, and Berger (2007), aging is associated with a high prevalence of up to 80% of persistent pain among residents of nursing homes. However, the figures vary widely among populations studied. Damsgård et al. (2018) found that as many as 80% of elderly patients in long-term care

are affected by chronic pain. Moreover, Molton, and Terrill (2014) found that between 60% and 75% of older adults over 65 years report some persistent pain. Similarly, Dogan and Goris (2018) found the rate of the elderly living in pain to be 76.9%.

Therefore, addressing this practice problem is crucial. Researchers have demonstrated the effectiveness of PEI on nurses' pain knowledge and behavior (Mędrzycka-Dąbrowska, Dąbrowski, Gutysz-Wojnicka, Basiński, & Kwiecień-Jaguś, 2018). According to Bonkowski et al. (2018), pain management education is often inadequate in nursing schools and students therefore lack knowledge of pain management basics. Dogan and Goris (2018) suggested regular, ongoing pain management education for LTCF personnel to promote adequate pain management and enhance the quality of life of elderly residents. According to Booker, Bartoszczyk, and Herr (2016), a critical first step in pain management in frail elders is assessment. It is therefore crucial that nurses and NLPs taking care of the elderly are proficient in the assessment and management of pain. Evidence from literature has indicated that lack of knowledge and misconceptions regarding pain management in the elderly are some of the factors contributing to underassessment (Noroozian, 2018).

Factors Contributing to Undertreatment of Pain

Factors have been identified that impact the effectiveness of pain assessment and treatment in the elderly. These factors include the staff's attitude and knowledge about pain management and the patients' characteristics. Researchers have shown that a lack of knowledge regarding pain assessment and treatment is a major factor in undertreatment of pain in the older adult (Ellis et al., 2019). In the same vein, Neumann (2017) noted that

the knowledge, skills, and attitude for best pain management outcomes are lacking in many nurses. The existence of biases, misconceptions, and myths may also contribute to undertreatment of pain. Other factors include the absence of formal assessment procedures as well as an exaggerated fear of causing addiction (Veal et al., 2018).

Regarding patient characteristics, researchers have demonstrated that elderly patients are sometimes reluctant to report pain due to the assumption that healthcare professionals “know best” (Clarke et al., 2014). According to Clarke et al. (2014), many older adults believe pain to be “an expected consequence of later life” (p. 2); they believe that seeking help is not an option, and they continue to live with pain. Other patient-related factors include stoicism and reluctance to report pain for fear of being stigmatized (Ellis et al., 2017). It is therefore the responsibility of the care provider to inquire about pain to prevent undertreatment. According to the American Nurses Association (2018) position statement, nurses have an ethical responsibility to relieve pain and the suffering it causes.

Methods of Assessing Pain

Methods of assessing pain include asking the individual to describe their pain. Various tools have been developed for assessing pain. These tools help to standardize pain measurement by quantifying pain intensity (Dogan & Goris, 2018). The tools include the Visual Analogue intensity Scale, Numerical Rating Scale, Verbal Descriptor Scale, Wong-Baker smiley faces, and a Numerical Descriptor Scale (Schofield, 2016). Kang and Demiris (2018) identified other tools including the Iowa Pain Thermometer, the short form Brief Pain Inventory, and the GPM. They found that the GPM and the Geriatric

Painful Events Inventory were designed specifically for older adults (Kang & Demiris, 2018). For patients with dementia, Kang and Demiris (2018) suggested other tools that consider a combination of physical and behavioral aspects such as mobility, appetite, sleep pattern, facial expression, and body language.

Effects of Staff Education

Researchers have demonstrated that educational interventions improve the knowledge and attitudes of nursing staff (Cimino, Lockman, McPherson, & Grant, 2016). Germossa, Sjetne, and Helleso (2018) observed that the educational intervention enabled an improvement in pain assessment and management as well as improvement in pain intensity for patients. A lack of in-depth pain management education has a direct impact on its underassessment among the elderly (Cimino et al., 2016). To improve pain assessment and management strategies, Booker (2015) recommended preparing Doctor of Nursing Practice students to complete DNP capstone/evidence-based practice projects that focus on clinical pain.

Nurses and NLP play a very important role in promoting and providing comfort and optimal care to patients who experience all types of pain, including the management of the suffering it causes (Cimino et al., 2016). Without conducting a routine pain assessment, nursing staff would not be aware of patients' suffering and would not provide the necessary intervention to reduce the suffering or evaluate how well the patient's pain treatments are working. Untreated or undertreated pain is associated with significant physiologic, emotional, mental, and economic consequences (Arnstein et al., 2017). Nursing staff must perform routine, thorough pain assessment at every patient encounter

because the provision of appropriate pain-relieving intervention depends on accurate assessment (Arnstein et al., 2017).

The American Association of Colleges of Nursing (AACN) (2006) DNP Essential III emphasizes the significance of clinical scholarship and analytical methods for evidence-based practice. This DNP project is relevant and significant to nursing practice as it can help increase nursing staff knowledge and skills for pain management and improve patient care based on evidence. The DNP nurse is prepared to apply the knowledge and skills acquired during training to conduct an assessment of practice setting. The DNP nurse is also proficient in quality improvement strategies and in creating and sustaining changes (AACN, 2006).

An overarching issue among the frail elderly residents of LTCFs is the underassessment and undermanagement of pain. The burdens of pain are compounded, and self-report of pain becomes difficult when the individuals are older and likely to experience cognitive impairment (Pu, Moyle, Jones, & Todorovic, 2018, p. 1609). According to Germossa, Sjetne, & Helleso (2018, p. 2), nursing staff's knowledge, skills, and attitude are pivotal to providing adequate pain management. Being equipped with knowledge and skills to assess and manage pain in this population is essential to improve patient care quality as well as their quality of life. The Joint Commission pain management standard for LTCFs emphasizes staff education to improve pain assessment and management (The Joint Commission, 2018).

Local Background and Context

This DNP project took place at an LTCF located in the southeastern region of the United States. The facility selected for the project is an 82-bed LTCF. The facility was selected at the request of the director who stated that nursing staff needs training in pain management, based on the complaints she received from family members when they visited their loved ones. Long term care facility residents and their families' satisfaction reports are recognized as measures of quality for the facilities (Shippee, Henning-Smith, Gaugler, Held, & Kane, 2017).

The facility had a nursing staff comprising of one registered nurse (RN), one licensed practical nurse (LPN), and forty nonlicensed personnel (NLP). The information received from the resident care coordinator is that there is currently no pain assessment tool in use. Absence of a formal pain assessment procedure will not allow for an accurate assessment of pain, resulting in poor pain management and poor patient outcomes.

Role of the DNP Student

The Doctor of Nursing Practice (DNP) nurse is prepared to apply the knowledge and skills acquired during training to conduct an assessment of practice setting. The DNP nurse is also proficient in quality improvement strategies and in creating and sustaining changes. According to DNP Essential II, this includes the ability to organize care to address emerging practice problems (AACN, 2006). In my care of elderly patients, assessment and management of pain are pivotal to the delivery of quality care. As a DNP student, my role was to develop the staff education program and direct its implementation and evaluation. In alignment with Walden University's principles of staff education, the

education program was developed using the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) model. In the analysis phase, my role was to inquire about the issues affecting practice and the learning needs of the nursing staff. The design phase involved identifying the learning objectives and how those objectives would be met. In the development phase, an appropriate method of delivery of the learning material was selected, while the material was presented in the implementation phase (Muruganantham, 2015). In the evaluation phase, participants completed pre and posttest of their learning based on an anonymous validated paper-based questionnaire. Additionally, my role will include facilitating the implementation of findings so that there is a translation of new evidence into practice which will result in improved quality of care delivered to patients. According to White, Dudley-Brown, and Terhaar (2016), “the ability to translate research evidence into routine clinical practice is fundamental to ensuring quality healthcare” (p. 25).

Summary

The purpose of this project was to improve the assessment and management of pain in elderly persons residing in LTCFs following an educational intervention for nursing staff. Between 45 percent and 80 percent of elderly patients living in the community are estimated to be in substantial pain that is undertreated (Veal, 2018). It is therefore essential to address this practice problem. Researchers have found that pain educational interventions (PEIs) have positive effects on nurses’ and NLPs’ pain knowledge and behavior (Mędrzycka-Dąbrowska et al., 2018). Knowles Theory of Adult Learning was used to guide the EBP project. The development of the project will be

addressed in the next section. This includes the collection and analysis of the evidence as well as the discussion of the research method.

Section 3: Collection and Analysis of Evidence

Introduction

As stated in Section 1, the purpose of this project was to improve the assessment and management of pain in elderly persons residing in LTCFs. Existing literature affirmed the occurrence of pain in the elderly population. Pain may impede recovery and, in the elderly, can be life-threatening (Arnstein et al., 2017). Lack of the correct attitude toward pain management as well as lack of familiarity with the drugs and the methods that are usually effective in controlling pain limit the nursing staff's ability to provide effective care for this patient population (Resnick et al., 2019). Education on pain management is effective in improving nursing staff's knowledge and attitude regarding pain assessment and management (Cimino et al., 2016).

Practice-Focused Question

The practice question for this project is as follows: Will implementing a staff education plan increase nursing staff's knowledge of pain assessment and management?

Evidence Generated by the Doctoral Project

Participants

Participants were both licensed and unlicensed nursing staff. Criteria for inclusion were RNs, LPNs, and nursing assistants working at the LTCF full-time or part-time. Participants were able to read and write in the English language. Participants were given the consent form for anonymous questionnaires.

Procedures

The director of nursing reviewed the draft of the education program as the expert panel member. Revisions based on her input were completed and submitted to her for review. An invitation to participate in the program was posted by the resident care coordinator in designated areas throughout the facility (Appendix A). Participants completed the Pain Knowledge and Belief Questionnaire developed by Zwakhalen et al. (2007) for measuring knowledge and attitudes regarding pain assessment and management in the elderly. Permission to use this instrument was obtained (see Appendix B). Responses to the 17 questions were rated on a 5-point Likert scale: (1) *completely disagree* (2) *disagree to some extent*, (3) *no opinion*, (4) *agree to some extent*, and (5) *completely agree*. A handout was developed and designed to serve as teaching material. Active learning strategies were used during training implementation. There were interactive discussions and reviews of pain assessment and management.

Protections

The project followed the guidelines outlined in the DNP Manual for Staff Education. The site approval form for the staff education doctoral project was signed by the facility director and submitted along with necessary Walden University IRB application. The project received IRB approval (#12-11-19-0623264). Participants were given the consent form for anonymous questionnaires. Participation was voluntary.

Data Analysis and Synthesis

The SPSS software package was used to analyze the results of the pre- and post-tests. Descriptive statistics were used to present the results of the pre- and post-tests.

Summary

Researchers have suggested that the barriers that lead to the undertreatment of pain can be caused by both the health care professional and the patient (Park et al., 2015). Inadequate management of pain is found to be common, and the negative implications can be profound. Knowledge deficits and inadequate pain assessment are key contributors to inadequate pain management. In Section 3, I discussed the planning, implementation, and evaluation of this project. In Section 4, I present the findings, implications, and recommendations from the education program.

Section 4: Findings and Recommendations

Introduction

Pain is a major problem among elderly residents of LTCFs. However, assessing and managing pain in this population is complex and very challenging for the nursing staff. Some of the challenges are related to the presence of comorbidities in the elderly (Schofield, 2016) and a lack of caregivers' knowledge (Schofield & Abdulla, 2018). Researchers have found that certified nursing assistants (CNAs) provide 80% of the hands-on care in the U.S. LTCF (Massey & Roter, 2015). It is therefore very important to provide education and training on pain assessment and management to this group of healthcare workers. Zysberg et al. (2019) noted that the case of the CNA in long term care is paradoxical in that those who have the most contact and the most intensive interaction with residents are also those having the least training. Zysberg et al. further asserted that nursing assistants hold one of the keys to quality care in LTCFs.

Findings and Implications

The purpose of this project was to determine if evidence-based educational training improves the nursing staff's knowledge of pain assessment and management. A 17-question 5-point Likert scale survey, the Pain Knowledge and Belief Questionnaire was completed by participants who are nursing staff working in a LTCF. The survey measures knowledge and attitudes regarding pain assessment and management in the elderly. Responses to the 17 questions were rated on a 5-point Likert scale: (1) *completely disagree*, (2) *disagree to some extent*, (3) *no opinion*, (4) *agree to some extent*,

and (5) *completely agree*. The results obtained from data analysis revealed similarities between staff working in project site LTCF and staff working in LTCFs in general.

Participants' ages ranged from 22 (the youngest) to 60 (the oldest). The average age of participants was 38.5 years. The median was also 38.5. LTCFs in general have more female employees than males. All 24 participants in this project were females. There was no male participant. Options for job titles were nursing assistant, CNA, LPN, and RN. Three participants did not indicate their job title, but 21 participants did. Eighteen of these (85.71%) were CNAs, two (9.52%) were nursing assistants, and one (4.76%) was LPN. There was no RN in the facility. See Table below.

Table 2

Participants' Job Titles

Job Category	Number of Respondents	Percentage
NA	2	9.52
CNA	18	85.71
LPN	1	4.76
RN	0	0.00
Total	21	100.00

Figure 1 (below) is a pie chart representing the participants' population data in Table 2.

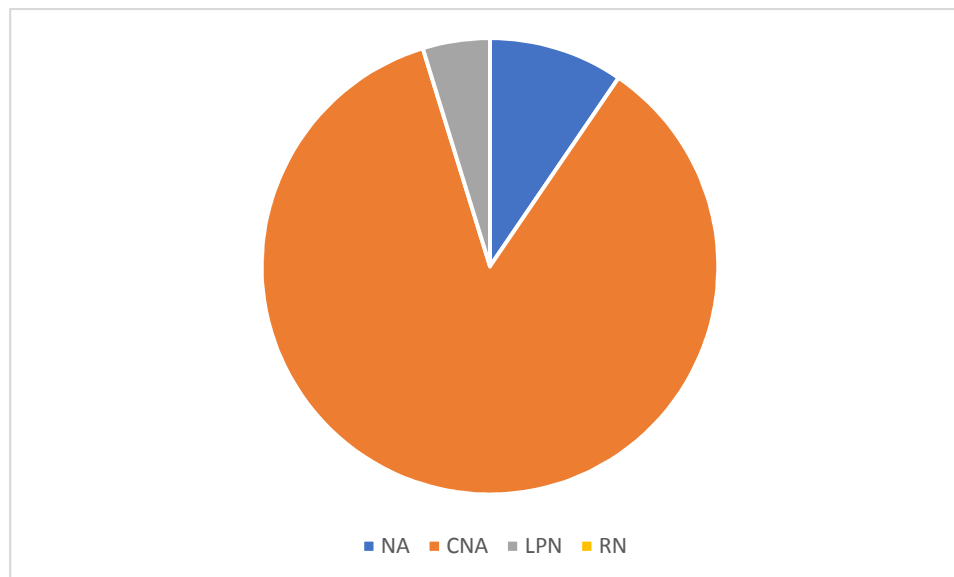


Figure 1. Participants' job titles.

In terms of the number of years in nursing, 23 participants responded. The number of years in nursing is divided into four groups (1 to 5, 6 to 10, 11 to 15, and 20 and above). Participants' experiences seemed to be evenly distributed. A slight majority of participants (8 of 23, or 34.78%) had 11 to 15 years in the nursing profession. The next grouping was 6 participants (26.09%) who had 20 or more years in the nursing profession. Altogether, the facility had very experienced care providers: 14 of 23 participants (60%) had been in the nursing profession for 11 years or more. Participants' number of years in nursing also correlated to the participants' age. The older they were, the more experienced they were. See Table 3 and Figure 2 below.

Table 3

Number of Years in Nursing Profession

Number of years	Number of respondents	Percentage
1-5	4	17.39
6-10	5	21.74
11-15	8	34.78
20+	6	26.09
Total	23	100.00

Figure 2 below represents the above Table 3 on a pie chart.

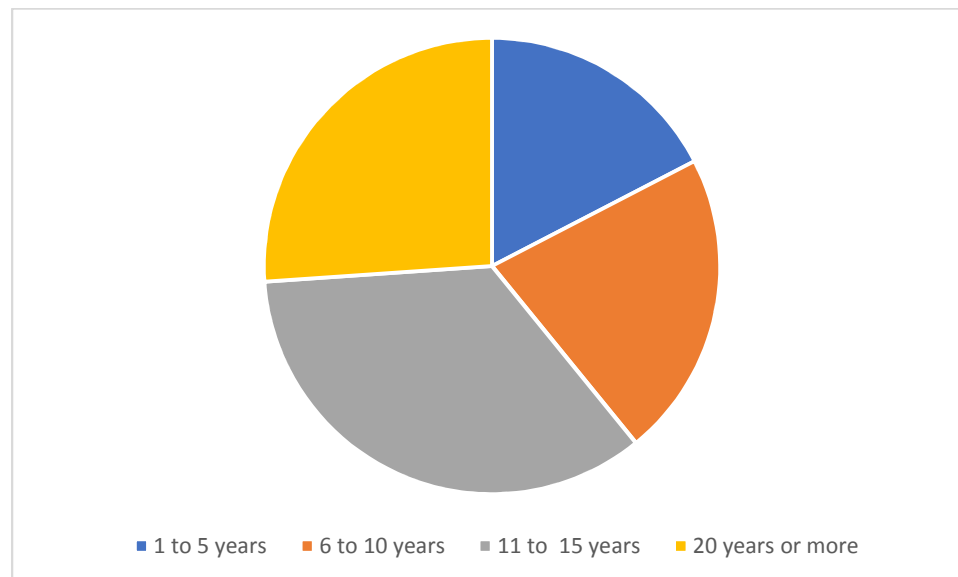


Figure 2. Number of years in nursing profession.

The number of years in long term or geriatric care is similar to the above, but it is more specific to the number of years participants had worked in long-term or geriatric care facilities. Twenty-two participants responded, and a slight majority (8 participants or 36.36%) had been serving in a LTCF or providing geriatric care for 6 to 10 years. An equal number (5, or 22.73%) had been doing this for 1 to 5 years and 20 years or more. It appeared that the facility staff had many years of experience in geriatric care. See Table 3 and Figure 4 below.

Table 4

Number of Years in Long-Term Care

Number of years	Number of respondents	Percentage
1-5	5	22.73
6-10	8	36.36
11-15	4	18.18
20+	5	22.73
Total	22	100.00

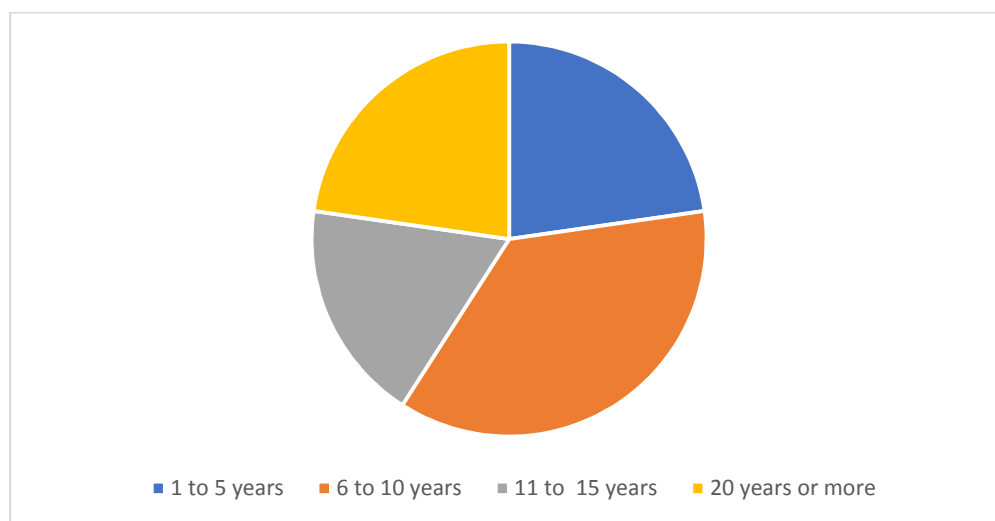


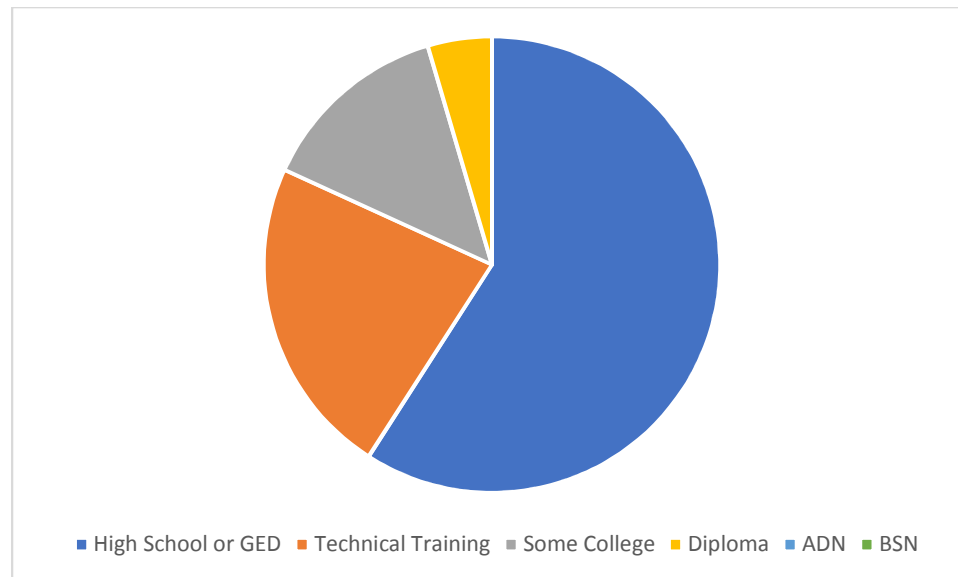
Figure 3. Number of years in long-term/geriatric care

For education level, there were 22 respondents. A majority of participants (approximately 60%) had a high school diploma or GED equivalent. This was distributed across the sample and among the younger and older staff. Next were those with technical training (5 or 22.73%) and “some college” (3 or 13.64%). One participant had a Diploma. See Table 5 and Figure 4 below.

Table 5

Participants' Education Level

Education level	Number of participants	Percentage
High School or GED	13	59.09
Technical training	5	22.73
Some college	3	13.64
Diploma	1	4.55
ADN	0	0.00
BSN	0	0.00
Total	22	100.00

*Figure 4. Participants' education level.*

The questionnaire contains 17 statements and the answers to each question are listed on a 5-point Likert scale. Below, please find the weights given to each point. In the analysis, “Completely disagree” and “Somewhat disagree” are treated as “negative” or “no,” while Somewhat agree and Completely agree are treated as “positive,” “affirmative,” or “yes.” The goal in this project was really “yes” or “no,” but some participants could feel forced to make an option. The “no opinion” option helps such participants to be part of the survey as their opinion would be crucial where they made it known. It is placed in the middle, coded as “3” with the advantage of demarcating “yes” from “no” but also linking both “yes” and “no” in weighted values during analysis. See Table 6 below for the Likert scale.

Table 6

Likert Scale Options Used in the Project

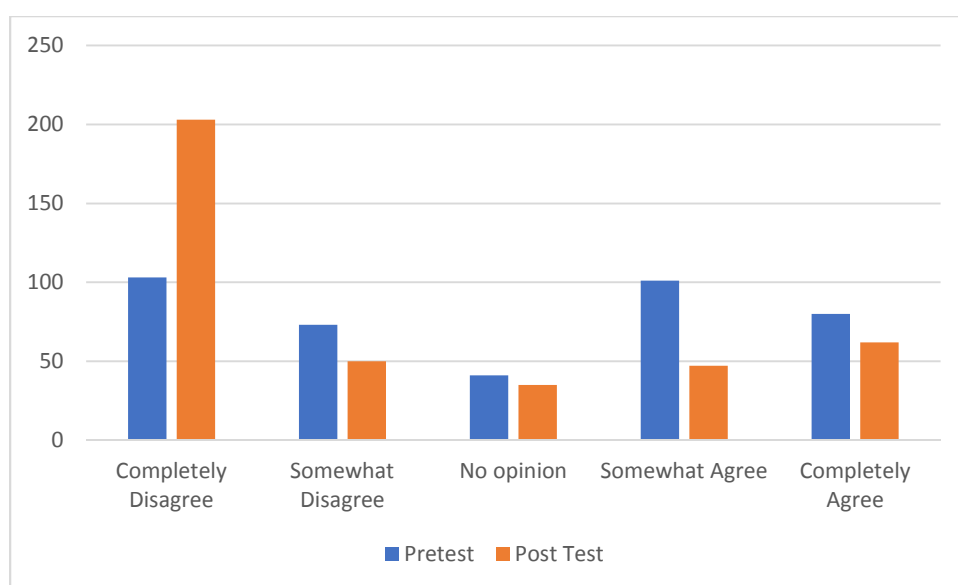
Completely disagree	Somewhat disagree	No opinion	Somewhat agree	Completely agree
1	2	3	4	5

There were seventeen statements. The statements were general opinions or attitudes about pain in elderly patients. The correct answers to most of the statements were “false” (i.e., disagree) but for a few, the correct answers were “true” (i.e., agree). The first survey was “pretest” after which an education session was implemented. The second survey was posttest, administered after the training. The results are tabulated as “before” and “after.” See Table 7 and Figure 5 below

Table 7

Summary of Data Analysis

	Completely Disagree	Somewhat Disagree	No opinion	Somewhat Agree	Completely Agree	Total
Pretest	103	73	41	101	80	398
Post Test	203	50	35	47	62	397

*Figure 5. Summary of data analysis*

Participants' responses changed, as can be seen in the table and chart above. The significance of the change can be observed not only in their responses to individual questions/statements but also in the reduction in the number of "no opinion" responses.

The data were analyzed further by comparing participants' responses against the correct answers. The answers were added up, averaged and then multiplied by 100 to get the percent correct. The test was administered to the same participants in both pre- and

posttest. The means can be seen in Table 2. As seen in Table 3, there was an increase of 27.85% of correct answers in the posttest and this was statistically significant at $t(23) = -6.570, p < 0.001$. This means the intervention had a significant impact on knowledge (See Table 8, Table 9, and Figure 6 below).

Table 8

Paired Samples Statistics for Self-Assessment of Knowledge in Assessing Pain in Elderly Patients

	Mean	Number	Std. Deviation	Std. Error Mean
Pretest	52.98	24	13.984	2.85466
Posttest	80.83	24	14.622	2.98487

Table 9

Paired Samples Tests for Self-Assessment of Knowledge in Assessing Pain in Elderly Patients

	Paired Differences		95% Confidence Interval of the Difference				
	Mean	Std Dev	Lower	Upper	<i>t</i>	<i>df</i>	<i>p</i>
Pre-Post	-27.85	20.767	-36.61	-19.08	-6.570	23	.000

Note: *t* = test.

df = degree of freedom.

p = probability value

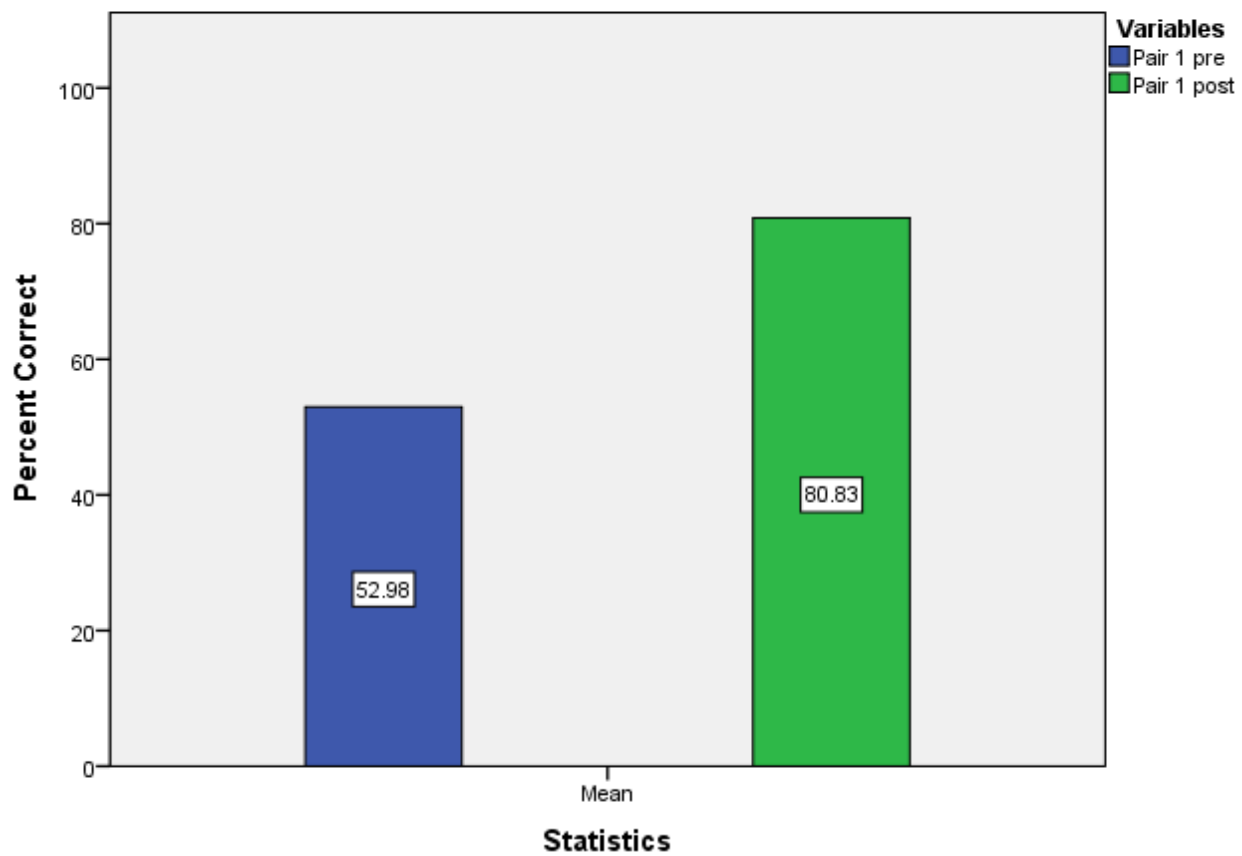


Figure 6. Mean scores of the pre and posttest.

Table 10.

Pretest: Participants' Responses

#	Statements	CD	SD	NO	SA	CA	Total
1	Older people experience pain less intensely than younger people	9	4	0	7	4	24
2	Pain medication works better in young people than in the elderly	10	1	0	9	4	24
3	Pain medication works longer in the elderly than in young people	6	7	3	6	2	24
4	Pain medication has more side effects in the elderly than in younger people	3	5	3	7	6	24
5	Dementia patients experience less pain than non-dementia patients	11	1	1	6	5	24
6	Assessing pain in dementia patients is a matter of guessing	4	4	1	11	4	24
7	Where I work, pain is assessed correctly	2	7	8	3	4	24
8	Where I work, pain is treated correctly	0	9	6	6	3	24
9	Where I work, much attention is given to pain in dementia patients	5	7	9	1	1	23
10	Pain medication should only be administered to patients suffering from severe pain	10	3	1	6	4	24
11	Patients are often prescribed too much pain medication	7	2	1	10	3	23
12	It is better to administer pain medication "when necessary," rather than according to a fixed schedule	9	2	1	8	3	23
13	Administering pain medication should be postponed as long as possible because dementia patients should receive as little pain medication as possible	6	4	3	7	3	23
14	A dementia patient should first report pain before receiving the next dose of pain medication	9	9	2	2	1	23
15	Pain is part of the aging process	4	4	1	2	11	22
16	Older people are more likely to be affected by pain than younger people	4	3		2	14	23
17	Pain medication, if administered in large quantities, easily leads to addiction among the elderly	4	1	1	8	8	22
	Total	103	73	41	101	80	398

Table 11.

Post Test: Participants' Responses

#	Statements	CD	D	NO	SA	CA	Total
1	Older people experience pain less intensely than younger people	18	2	1	1	2	24
2	Pain medication works better in young people than in the elderly	18	3	1	2	0	24
3	Pain medication works longer in the elderly than in young people	4	1	1	3	14	23
4	Pain medication has more side effects in the elderly than in younger people	3	2	1	3	15	24
5	Dementia patients experience less pain than non-dementia patients	15	7	1	1	0	24
6	Assessing pain in dementia patients is a matter of guessing	10	3	2	5	2	22
7	Where I work, pain is assessed correctly	7	4	7	4	2	24
8	Where I work, pain is treated correctly	5	4	6	6	3	24
9	Where I work, much attention is given to pain in dementia patients	6	4	8	3	3	24
10	Pain medication should only be administered to patients suffering from severe pain	20	2	0	2	0	24
11	Patients are often prescribed too much pain medication	8	8	1	5	1	23
12	It is better to administer pain medication "when necessary," rather than according to a fixed schedule	3	1	1	4	15	24
13	Administering pain medication should be postponed as long as possible because dementia patients should receive as little pain medication as possible	18	2	2		1	23
14	A dementia patient should first report pain before receiving the next dose of pain medication	18		1	3	1	23
15	Pain is part of the aging process	18	2	0	1	1	22
16	Older people are more likely to be affected by pain than younger people	18	2	1	1	1	23
17	Pain medication, if administered in large quantities, easily leads to addiction among the elderly	14	3	1	3	1	22
	Total	203	50	35	47	62	397

The significance of the training may be viewed from participants' responses to individual items or statements in the questionnaire. Each statement measured perception, but these were weighted against the correct answer. Item #1 stated "Older people experience pain less intensely than younger people," and the correct answer was false. This meant that the average response should tend toward "disagree." In Pretest, 13 participants were correct but in Post Test, 21 participants were correct. In Pretest, the mean score was 2.71 but in Posttest, the mean score dropped to 1.63, a 39.85% change. See Table 10, Table 11, Table 12, Table 13, Figure 7, and Figure 8.

Table 12

#1. Mean Pretest and Posttest "Older People Experience Pain less Intensely than Younger People"

	Mean	Number Correct
Pretest	2.71	13
Post Test	1.63	21

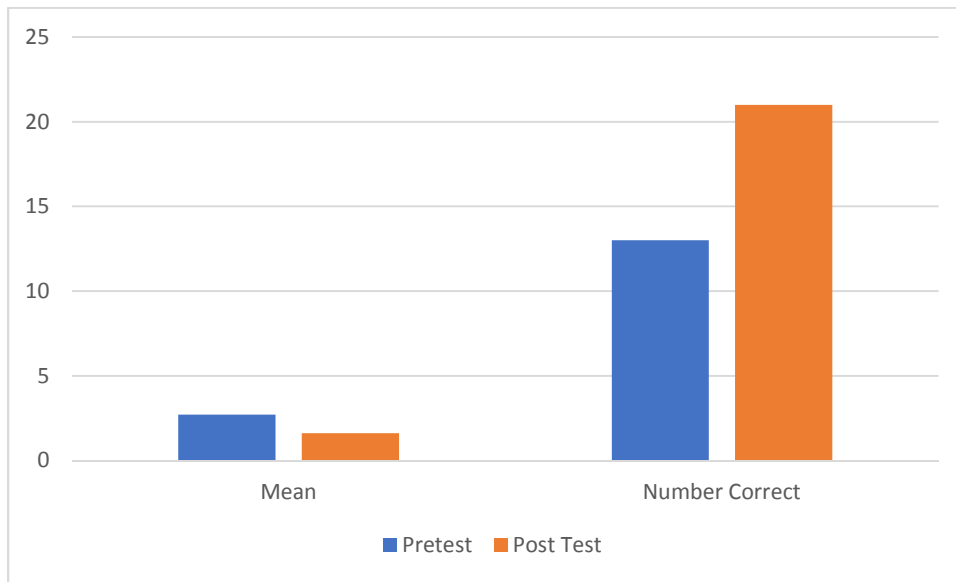


Figure 7. #1. Mean Pretest and Posttest “Older people experience pain less intensely than younger people”

Table 13

#1. Likert Scale Responses “Older people experience pain less intensely than younger people”

	Completely Disagree	Somewhat Disagree	No Opinion	Somewhat Agree	Completely Agree	Total
Pretest	9	4	0	7	4	24
Post Test	18	2	1	1	2	24

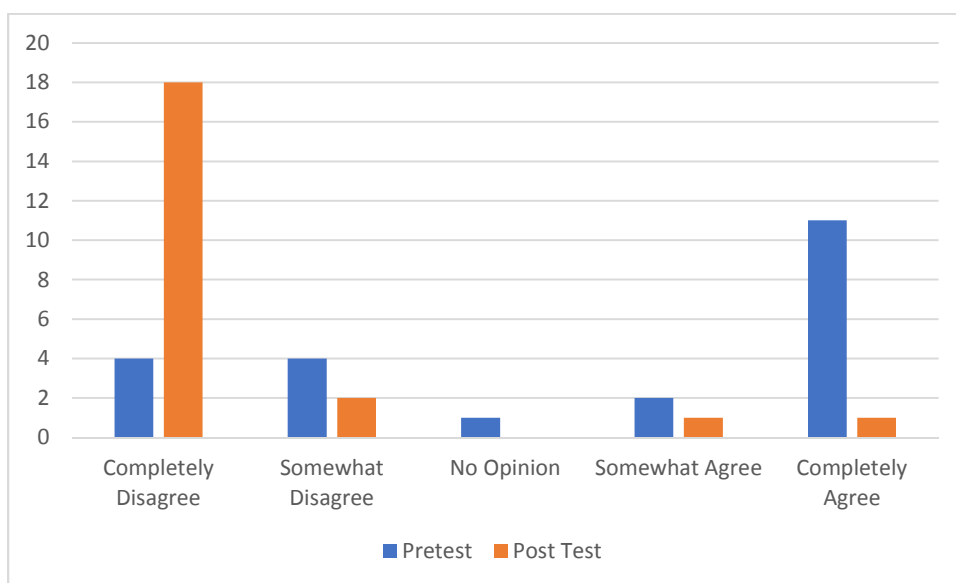


Figure 8 #1. Likert Scale Responses “Older people experience pain less intensely than younger people”

Another item that demonstrates participants’ shift was #15 “Pain is part of the aging process.” This statement was false. At the Pretest stage, 13 participants agreed with this statement. At Post Test, however, 20 participants disagreed with the statement. The results are presented in Table 14 and Figure 9.

Table 14

#15. Likert Scale Responses “Pain is Part of the Aging Process”

	Completely Disagree	Somewhat Disagree	No Opinion	Somewhat Agree	Completely Agree	Total
Pretest	4	4	1	2	11	22
Post Test	18	2	0	1	1	22

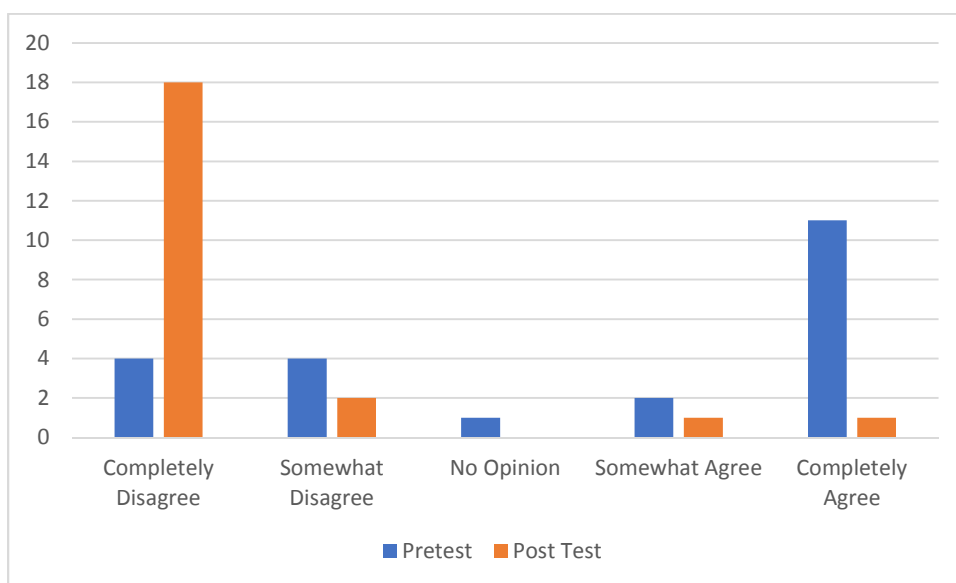


Figure 9. #15. Likert Scale Responses "Pain is part of the aging process"

Table 15
Correct and Incorrect Responses by Statement

STATEMENT	TRUE /FALSE
1. Older people experience pain less intensely than younger people	FALSE
2. Pain medication works better in young people than in the elderly	FALSE
3. Pain medication works longer in the elderly than in young people	TRUE
4. Pain medication has more side effects in the elderly than in younger people	TRUE
5. Dementia patients experience less pain than non-dementia patients	FALSE
6. Assessing pain in a dementia patient is a matter of guessing	FALSE
7. Where I work, pain is assessed correctly	FALSE
8. Where I work, pain is treated correctly	FALSE
9. Where I work, much attention is given to pain in dementia patients	FALSE
10. Pain medication should only be administered to patients suffering from severe pain	FALSE
11. Patients are often prescribed too much pain medication	FALSE
12. It is better to administer pain medication 'when necessary', rather than according to a fixed schedule	TRUE
13. Administering pain medication should be postponed as long as possible because dementia patients should receive as little pain medication as possible	FALSE
14. A dementia patient should first report pain before receiving the next dose of pain medication	FALSE
15. Pain is part of the aging process	FALSE
16. Older people are more likely to be affected by pain than younger people	FALSE
17. Pain medication, if administered in large quantities, easily leads to addiction among the elderly	FALSE

Recommendations

Some strategies are recommended to improve the quality of care delivered to elderly residents of LTCFs by improving effective pain assessment and management in this population. These strategies include incorporating the components of pain assessment into routine care and making an inquiry about pain at each patient encounter. Patients' plans of care are to be developed and implemented to support pain assessment and pain management interventions, with the expected result of consistent use of protocol for pain assessment. Furthermore, regular, ongoing pain management education is recommended for LTCFs personnel to dispel myths and misconceptions, promote adequate pain management, and enhance the quality of life of elderly residents. According to Schofield (2016), knowledge of pain management is a necessity for nursing staff.

Strengths and Limitations of the Project

One of the strengths of this evidence-based project is the awareness of the need to address staff's training needs to improve patient outcomes. Also, the use of Knowles adult learning theory provided a strong framework for the project and demonstrated that the adult learners at the project site are ready to learn and are self-directed as evidenced by an overall increase in knowledge, according to data analysis. The project long term care facility may serve as a pilot for other LTCFs desiring to improve pain assessment and management skills of their staff.

Project limitations include time constraints and nonlicensed personnel's limited educational preparation. In Georgia's assisted living facilities, care is directed by the LPN

and provided directly by nursing assistants (Rules for PCH p. 44 – Staffing). Another limitation was the small sample size of staff surveyed and staff attrition. Also, the data was collected in a rural setting. Results may be different in an urban setting.

Section 5: Dissemination Plan

The findings of this evidence-based project will be disseminated to the stakeholders -- staff and leaders at the project site. The purpose of the dissemination is to develop an educational program to improve pain assessment and the management skills of the staff. I plan to disseminate my evidence-based project using the oral presentation as well as handouts and posters so staff can view them at their convenience. I also plan to disseminate the results at my organization's annual conference to share the outcomes of the project.

Analysis of Self

During this DNP project journey, I have experienced real personal and professional growth. I have learned new ways of interacting with others, collaborating with others within an organization, learned teamwork skills, and developed leadership capabilities. As a DNP-prepared nurse, I have gained experiences that have helped prepare me for leadership roles.

I have gained the confidence needed to seek opportunities to put into practice all the leadership skills that I have learned. It may be in the area of leading quality improvement projects or other evidence-based practice to improve care. I am better able to provide care of the utmost standing by not only being able to find the most recent evidence-based research from a variety of areas but also being able to analyze and evaluate the information. The nurse is expected to then integrate the information and approaches found into their practice (AACN, 2006).

Summary

Nursing staff in LTCFs comprise of nursing assistants, some of who have been trained on the job to administer medications and perform other nursing care. These NLPs are supervised by an LPN or an RN. In the state of Georgia, it is not mandatory to have an RN on staff. NLPs play an important role in assessing and managing pain. To optimize pain management of the elderly residents of LTCFs it is crucial to provide pain assessment and management education to the staff who provide direct resident care. Through this DNP project, I demonstrated that implementing a staff education plan increases nursing staff's knowledge of pain assessment and management. Similar projects can be implemented in other LTCFs to improve the staff's knowledge and skills in pain assessment and management. Other evidence-based protocols can also be developed for managing common issues found among elderly residents of LTCFs.

References

- Alamdari, G., & Laganà, L. (2015). The relationship of older adults' physical pain to depression and post-traumatic stress disorder (PTSD): A review. *Journal of Geriatric Medicine and Gerontology, 1*(2), 1-19. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5023019/>.
- Alderman, C. P., Soulsby, N. R., Ward, T. S., & Bisiani, L. (2018). Understanding pain in aged care: The UNPAC study—exploring the nature and of chronic pain in the Australian aged care setting. *Journal of Pharmacy Practice and Research, 48*(1), 85-91. doi: 10.1002/jppr.1419
- American Association of Colleges of Nursing. (2006). The essentials of doctoral education for advanced nursing practice. Retrieved from <http://www.aacn.nche.edu/publications/position/DNPEssentials.pdf>
- American Nurses Association. (2018). The ethical responsibility to manage pain and the suffering it causes. ANA Position Statement. Retrieved from <https://www.nursingworld.org/practice-policy/nursing-excellence/official-position-statements/id/the-ethical-responsibility-to-manage-pain-and-the-suffering-it-causes/>
- Arnstein, P., Herr, K. A., & Butcher, H.K. (2017). Evidence-based practice guideline: Persistent pain management in older adults. *Journal of Gerontological Nursing, 43*(7), 20-31. doi: 10.3928/00989134-20170419-01
- Bonkowski, S. L., De Gagne, J. C., Cade, M. B., & Bulla, S. A. (2018). Evaluation of a pain management education program and operational guideline on nursing

- practice, attitudes, and pain management. *Journal of Continuing Education in Nursing*, 49(4), 178-185. doi: 10.3928/00220124-20180320-08
- Booker, S. (2015). The future of nursing; the future of pain management. *The Pelican News* 71(1), 3. Retrieved from https://d3ms3kxrsap50t.cloudfront.net/uploads/publication/pdf/1153/Louisiana_Nurse_3_15.pdf
- Booker, S. S., Bartoszczyk, D. A., & Herr, K. A. (2016). Managing pain in frail elders. *American Nurse Today*, 11(4), 1-14. Retrieved from <https://www.americannurse.com/managing-pain-frail-elders/>
- Chan, S. (2010). Applications of andragogy in multi-disciplined teaching and learning. *Journal of adult education*, 39(2), 25-35. Retrieved from <https://eric.ed.gov/?id=EJ930244>.
- Cimino, N. M., Lockman, K., Grant, M., & McPherson, M. L. (2016). Knowledge, skills, and attitudes in caring for older adults with advanced illness among staff members of long-term care and assisted living facilities: An educational needs assessment. *American Journal of Hospice and Palliative Medicine*, 33(4), 327-334. DOI: 10.1177/1049909114561996..
- Clarke, A., Martin, D., Jones, D., Schofield, P., & Anthony, G. (2014). ‘I try and smile, I try and be cheery, I try not to be pushy. I try to say ‘I’m here for help’ but I leave feeling... worried”: A qualitative study of perceptions of interactions with health professionals by community-based older adults with chronic pain. *PLoS One*, 9(9), 1-7. doi: 10.1371/journal.pone.0105450. Retrieved from: ncbi.nlm.nih.gov

- Crowe, M., Jordan, J., Gillon, D., McCall, C., Frampton, C., & Jamieson, H. (2017). The prevalence of pain and its relationship to falls, fatigue, and depression in a cohort of older people living in the community. *Journal of Advanced Nursing*, *73*(11), 2642-2651. doi: 10.1111/jan.13328.
- Damsgard, E., Solgård, H., Johannessen, K., Wennevold, K., Kvarstein, G., Pettersen, G., & Garcia, B. (2018). Understanding pain and pain management in elderly nursing home patients applying an interprofessional learning activity in health care students: A Norwegian pilot study. *Pain Management Nursing*, *19*(5), 516-524. doi: 10.1016/j.pmn.2018.02.064.
- Dogan, N., & Goris, S. (2018). The effect of pain levels and pain beliefs of elderly people living in nursing homes on quality of life. *International Journal of Caring Sciences*, *11*(2), 947. Retrieved from [https://internationaljournalofcaringsciences.org/docs/36_dogan_original_10_2%20\(1\).pdf](https://internationaljournalofcaringsciences.org/docs/36_dogan_original_10_2%20(1).pdf)
- Ellis, J. M., Wells, Y., & Ong, J. S. M. (2019). Non-pharmacological approaches to pain management in residential aged care: a pre-posttest study. *Clinical Gerontologist*, *42*(3), 286-296. doi: 10.1080/07317115.2017.1399189.
- Furjanic, M., Cooney, A., & McCarthy, B. (2016). Nurses' knowledge of pain and its management in older people. *Nursing Older People*, *28*(9), 32-37. DOI: 10.7748/nop.2016.e814
- Germossa, G. N., Sjetne, I. S., & Hellesø, R. (2018). The impact of an in-service educational program on nurses' knowledge and attitudes regarding pain

management in an Ethiopian University Hospital. *Frontiers in Public Health*, 6, 1-7. doi: 10.3389/fpubh.2018.00229.

Glowacki, D. (2015). Effective pain management and improvements in patients' outcomes and satisfaction. *Critical Care Nurse*, 35(3), 33-41. doi: 10.4037/ccn2015440.

Hunnicut, J. N., Ulbricht, C. M., Tjia, J., & Lapane, K. L. (2017). Pain and pharmacologic pain management in long-stay nursing home residents. *Pain*, 158(6), 1091–1099. doi:10.1097/j.pain.0000000000000887

The Joint Commission. (2018). R³ Report: Pain assessment and management standards for nursing care centers. Retrieved from https://www.jointcommission.org/-/media/tjc/documents/standards/r3-reports/r3_21_pain_standards_ncc_12_21_18_final.pdf

Kang, Y., & Demiris, G. (2018). Self-report pain assessment tools for cognitively intact older adults: Integrative review. *International Journal of Older People Nursing*, 13(2), e12170. doi:10.1111/opn.12170

Knowles, M. S. (1980). *The modern practice of adult education: From pedagogy to andragogy* (revised and updated). Englewood Cliffs, NJ: Cambridge Adult Education.

Massey, M., & Roter, D. L. (2016). Assessment of immigrant certified nursing assistants' communication when responding to standardized care challenges. *Patient Education and Counseling*, 99(1), 44-50. doi: 10.1016/j.pec.2015.08.010.

- Mędrzycka-Dąbrowska, W., Dąbrowski, S., Gutysz-Wojnicka, A., Basiński, A., & Kwiecień-Jaguś, K. (2018). Nurses' knowledge and barriers regarding pain management. *Journal of PeriAnesthesia Nursing, 33*(5), 715-726. doi: 10.1016/j.jopan.2017.03.005.
- Molton, I. R., & Terrill, A. L. (2014). Overview of persistent pain in older adults. *American Psychologist, 69*(2), 197-207. doi: 10.1037/a0035794.
- Muruganantham, G. (2015). Developing of E-content package by using ADDIE model. *International Journal of Applied Research, 1*(3), 52-54. Retrieved from https://www.academia.edu/37859325/Developing_of_E-content_package_by_using_ADDIE_model
- Neumann, M. (2017). Knowledge and attitudes of orthopedic nurses regarding pain management. Graduate Student Projects and Scholarship, Digital Commons at Liberty University. Retrieved from https://digitalcommons.liberty.edu/nurse_grad_proj_schol/11/
- Noroozian, M., Raeesi, S., Hashemi, R., Khedmat, L., & Vahabi, Z. (2018). Pain: The neglect issue in old people's life. *Macedonian Journal of Medical Sciences, 6*(9), 1773–1778. doi:10.3889/oamjms.2018.335
- Park, H. R., Park, E., & Park, J. W. (2016). Barriers to chronic pain management in community-dwelling low-income older adults: Home-visiting nurses' perspectives. *Collegian, 23*(3), 257-264. <https://doi.org/10.1016/j.colegn.2015.05.002>

- Resnick, B., Boltz, M., Galik, E., Holmes, S., Vigne, E., Fix, S., & Zhu, S. (2019). Pain assessment, management, and impact among older adults in assisted living. *Pain Management Nursing*, *20*(3), 192-197. doi: 10.1016/j.pmn.2019.02.008.
- Schofield, P. (2016). Pain management in older adults. *Medicine*, *45*(1), 41-45.
DOI:<https://doi.org/10.1016/j.mpmed.2016.10.005>
- Schofield, P., & Abdulla, A. (2018). Pain assessment in the older population: What the literature says. *Age and Ageing*, *47*(3), 324-327. doi: 10.1093/ageing/afy018.
- Shahar, I., Mendelson, G., Gerbi, S., & Natan, M. B. (2018). Pain assessment and management by nurses in a geriatric setting: Discrepancies between guidelines and documented practice. *Pain Management Nursing*, *19*(5), 456-463. doi: 10.1016/j.pmn.2018.04.001.
- Shippee, T. P., Henning-Smith, C., Gaugler, J. E., Held, R., & Kane, R. L. (2017). Family satisfaction with nursing home care: The role of facility characteristics and resident quality-of-life scores. *Research on Aging*, *39*(3), 418-442. doi: 10.1177/0164027515615182.
- Smith, P. D., Becker, K., Roberts, L., Walker, J., & Szanton, S. L. (2016). Associations among pain, depression, and functional limitation in low-income, home-dwelling older adults: An analysis of baseline data from CAPABLE. *Geriatric Nursing*, *37*(5), 348-352. doi: 10.1016/j.gerinurse.2016.04.016.
- O'Hora, K. A., & Roberto, K. A. (2019). Navigating emotions and relationship dynamics: Family life review as a clinical tool for older adults during a relocation transition

into an assisted living facility. *Aging & Mental Health*, 23(4), 404-410. doi: 10.1080/13607863.2017.1423028.

Paul-Savoie, E., Bourgault, P., Potvin, S., Gosselin, E., & Lafrenaye, S. (2018). The impact of pain invisibility on patient-centered care and empathetic attitude in chronic pain management. *Pain Research and Management*, 2018, 1-8. doi: 10.1155/2018/6375713.

Pu, L., Moyle, W., Jones, C., & Todorovic, M. (2018). The effectiveness of social robots for older adults: a systematic review and meta-analysis of randomized controlled studies. *The Gerontologist*, 59(1), e37-e51. doi: 10.1093/geront/gny046.

Tse, M. M., Tang, S. K., Wan, V. T., & Vong, S. K. (2014). The effectiveness of physical exercise training in pain, mobility, and psychological well-being of older persons living in nursing homes. *Pain Management Nursing*. Dec;15(4):778-88. doi: 10.1016/j.pmn.2013.08.003

Vadivelu, N., Kai, A. M., Kodumudi, G., Babayan, K., Fontes, M., & Burg, M. M. (2017). Pain and Psychology-A Reciprocal Relationship. *The Ochsner journal*, 17(2), 173–180. PMID: PMC5472077. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5472077/pdf/i1524-5012-17-2-173.pdf>

Veal, F., Williams, M., Bereznicki, L., Cummings, E., Thompson, A., Peterson, G., & Winzenberg, T. (2018). Barriers to optimal pain management in aged care facilities: an Australian qualitative study. *Pain Management Nursing*, 19(2), 177-185. doi: 10.1016/j.pmn.2017.10.002.

White, K. M., Dudley-Brown, S., & Terhaar, M. F. (Eds.). (2016). *Translation of evidence into nursing and health care*. Springer Publishing Company.

Zwakhaleh, S. M., Hamers, J. P., Peijnenburg, R. H., & Berger, M. P. (2007). Nursing staff knowledge and beliefs about pain in elderly nursing home residents with dementia. *Pain Research and Management, 12*(3), 177-184. DOI: 10.1155/2007/518484.

Zysberg, L., Band-Winterstein, T., Doron, I., Shulyaev, K., Siegel, E. O., Kornas-Biela, D., & Zisberg, A. (2019). The health care aide position in nursing homes: A comparative survey of nurses' and aides' perceptions. *International Journal of Nursing Studies, 94*, 98-106. DOI: 10.1016/j.ijnurstu.2019.03.007

Appendix A: Invitation to Participate

Dear Nursing Staff:

My name is Omotola Adebayo. I am a doctoral student at Walden University Doctor of Nursing Practice Program. I am seeking nursing staff to participate in my DNP project that I am conducting a project titled: *Improving Effective Pain Assessment and Management in Elderly Patients*. This project intends to improve the assessment and management of the pain of the elderly patients residing in long-term care.

The project involves an educational in-service for nursing staff.

Participation is completely voluntary, and you may withdraw from participating in this project at any time. Participation is completely anonymous; therefore, it does not require you to provide your name or any other identifying information.

If you would like to participate in the project please attend one of the programs listed below.

Monday, December 30th, 2019

2:00 pm and 4:00 pm

Your participation in the project will be of great importance to assist in social change in ensuring quality care for our older adults.

Thank you for your time and participation

Sincerely,

Omotola Adebayo
Doctoral Student, Walden University

Appendix B. Permission to Use Instrument

Re: Request for Permission

Zwakhale, Sandra (HSR)

Mon 7/29, 7:09 AM

Omotola Adebayo

Dear Mrs/ Mr, hereby I grant you our permission, bw Sandra

SMG (Sandra) Zwakhale, Ph.D., RN □

Full professor Nursing Science

Department of Health Services Research

-Focusing on Value-based Care and Ageing-

From: Omotola Adebayo

Sent: Friday, July 19, 2019, 12:56 PM

To: Zwakhale, Sandra (HSR)

Subject: Request for Permission

July 19, 2019

Request for Permission for Questionnaire Use

Dear Dr., Zwakhale:

I write to request for permission to use the questionnaire developed in your research:

Zwakhale, Hamers, Peijnenburg, & Berger, 2007: Nursing staff knowledge and beliefs about pain in elderly nursing home residents with dementia.

I am a nurse practitioner in home-based primary care in the Veteran Affairs Health Administration Health Care System and I have a keen interest in improving the quality of care provided for the elderly homebound patients. I am pursuing the Doctor of Nursing Practice degree, a clinical doctorate that requires the completion of a scholarly project that demonstrates the translation of research into practice.

My capstone project seeks to increase the knowledge of nursing staff in the assessment and management of pain in the elderly homebound patients. An educational intervention will be conducted using the Defense and Veteran Pain Rating Scale.

I am requesting permission to use your validated questionnaire as a means of evaluating the change in knowledge regarding pain as well as the assessment and management of pain among nursing staff providing care to the elderly in the home. The tool will be adapted for use with home-based primary care nursing staff.

Thank you for your consideration of my request.

Sincerely,

Omotola A. Adebayo

Appendix C: Education Program

Teaching methods: Handout and group discussion

Objective	Content	Teaching Method
Define pain	“An unpleasant sensory and emotional experience that is associated with actual or potential tissue damage” (IASP, 2014, para 1	Group discussion: What does pain mean to you? What comes to your mind when your patient says they are in pain?
Differentiate between acute and chronic pain	<p>Acute pain is caused by a health problem or injury. The pain goes away when its cause is treated. The pain may be caused by the following:</p> <ul style="list-style-type: none"> • An illness or injury that needs emergency care • An operation, such as heart surgery <p>Chronic pain lasts 3 to 6 months or more. It can be started by a health problem or injury, such as arthritis or a shoulder injury, but will continue long after the tissues have healed. Chronic pain can also exist without a clear cause. Chronic pain needs to be treated differently than acute pain. Things that work for acute pain (such as rest, not moving, or medicines) can actually make chronic pain worse.</p>	Group discussion: How do your patients act when they are in pain? How do you know they have pain?
Recognize non-verbal cues from the patient that may demonstrate pain	<p>Moaning, groaning, crying, screaming, aggression, restlessness.</p> <p>Facial activity may include tears and squeezing the</p>	

	eyes shut. These indicators may help caregivers to recognize pain and take action to manage it.	
Describe behavioral pain indicators in patients with cognitive impairment	Wanting to be left alone, eating less, not cooperating, aggression. Patient may be stiff, spastic, tense, or rigid. They may be sensitive to touch or may be protecting, defending, or guarding the hurting body part.	When you see patients exhibiting these behaviors what do you say or do?
Identify the adverse effects of untreated pain	The quality of life of older adults with pain is significantly decreased and may result in impaired ability to recover from various illnesses (Shahar, Mendelson, Gerbi, & Natan, 2018). If left untreated, pain can interfere with the quality of life.	What might happen if we do not address a patient's pain?
Understand the importance of effective pain management	Appropriate pain management results in "quicker clinical recovery, shorter hospital stays, fewer readmissions, and improved quality of life	
Describe the various approaches to pain treatment	- Pharmacological, e.g. medications -Non-pharmacological, e.g. stretching and capable exercises. Dietary approach: • An anti-inflammatory diet is an approach to eating that is intended to decrease inflammation (and related pain). Like drugs, foods can have both helpful and harmful effects. Anti-inflammatory	What can we do to manage pain with our patients?

	<p>foods include Berries, fatty fish, broccoli, avocados. green vegetables, tomatoes peppers. mushrooms. grapes.</p> <p>Foods that are bad for inflammation include processed meats, sugary drinks, trans fats (found in fried foods), white bread, white pasta, gluten, soybean oil and vegetable oil, processed snack foods, such as chips and crackers</p>	
--	---	--

Appendix D: Self-Assessment of Knowledge in Assessing Pain in Elderly Patients

Age ____

Gender: Male ____ Female ____

Job Title: NA ____ CNA ____ LPN ____ RN ____

Number of years in nursing profession: 1-5 __ 6-10 __ 11-15 __ 20+

Number of years in Long-Term/ Geriatric Care: 1-5 __ 6-10 __ 11-15 __ 20+

Education level: High School Diploma or GED __ Technical training __ some college __ Diploma __ ADN __ BSN __

Check one response for each statement	Completely disagree	Somewhat disagree	No opinion	Somewhat agree	Completely agree
1. Older people experience pain less intensely than younger people					
2. Pain medication works better in young people than in the elderly					
3. Pain medication works longer in the elderly than in young people					
4. Pain medication has more side effects in the elderly than in younger people					
5. Dementia patients experience less pain than non-dementia patients					
6. Assessing pain in a dementia patient is a matter of guessing					
7. Where I work, pain is assessed correctly					
8. Where I work, pain is treated correctly					
9. Where I work, much attention is given to pain in dementia patients					

10. Pain medication should only be administered to patients suffering from severe pain					
11. Patients are often prescribed too much pain medication					
12. It is better to administer pain medication 'when necessary', rather than according to a fixed schedule					
13. Administering pain medication should be postponed as long as possible because dementia patients should receive as little pain medication as possible					
14. A dementia patient should first report pain before receiving the next dose of pain medication					
15. Pain is part of the aging process					
16. Older people are more likely to be affected by pain than younger people					
17. Pain medication, if administered in large quantities, easily leads to addiction among the elderly					

Zwakhalen, Hamers, Peijnenburg, and Berger, (2007).

IRB Number: 12-11-19-0623264