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Person-Centered Care Education for Caregivers of Patients With Dementia in Long-Term Care Settings

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Doctor of Nursing Practice

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School of Nursing

Person-Centered Care Education for Caregivers of Patients With Dementia in Long-Term Care Settings

A doctoral project submitted in partial satisfaction
of the requirements for the degree of
Doctor of Nursing Practice

by

Dawn Buckmire

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Abstract

Person-centered care (PCC) guidelines are being used as a care model to improve health outcomes for residents with impaired cognition. The researcher utilized PCC guidelines to educate caregivers in residential homes to provide care based on the residents' individualized needs and choices to reduce worsening health conditions and potentially avoidable hospitalizations. The researcher created an educational tool to improve prompt management of health conditions for residents with cognitive impairment and set up a control group ($n = 4$) and an intervention group ($n = 4$) to conduct this project. The intervention group received the PCC education guidelines, whereas the control group did not. The researcher utilized Quality of Life in Late-Stage Dementia (QUALID) and Person-Centered Care Assessment Tool (P-CAT) questionnaires to identify caregivers' perceptions of the person-centeredness and quality of life for residents under their care before and after the PCC education. Caregivers in the intervention group did not show any significant changes in PCC or QUALID scores pre- and post-intervention. In addition, caregivers in the control group had a mean preintervention P-CAT total score ($M = 51.00$, $SD = 4.24$) that was significantly higher than the mean post-intervention P-CAT total score ($M = 49.50$, $SD = 4.12$). The scores of both groups indicated that their work environments had a high level of PCC before the intervention. Further studies should be done on PCC education in residential care homes to identify the health outcomes of residents with impaired cognition whose caregivers received PCC education and training for 6 months to 1 year.

Keywords: dementia, impaired cognition, person-centered care (PCC), quality of life (QOL)

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Chapter 1: Introduction

Problem Statement

Alzheimer’s is a major health problem that leads to worsening health conditions and unnecessary hospitalizations for residents living in residential care homes (Segal, Rollins, Hodges, & Roozeboom, 2014). Dementia caused by Alzheimer’s is a chronic condition that may negatively impact the health of residents living in assisted living facilities (ALFs) for the elderly. Patients with cognitive impairment caused by dementia are faced with health conditions that increase their risk of potentially avoidable hospitalization (Bernardes, Massano, & Freitas, 2018). Health conditions that could have been treated effectively in the community are classified as *potentially avoidable hospitalizations* (PAHs) (Segal et al., 2014, p. E2). Delayed medical treatments and uncontrolled chronic conditions increase the risk of hospitalization for residents with impaired cognition (Lin, Fillit, Cohen, & Neumann, 2013). Thus, caregivers who provide assistance with daily care for residents in residential care homes should be trained with an educational evidence-based care management tool to improve early identification and timely management of health conditions that may cause PAHs for patients with cognitive impairment. In this project, I used Kitwood’s (1997) person-centered care (PCC) concepts to educate caregivers working at three ALFs in Maryland on providing individualized care for residents with cognitive impairment to improve their ability to function and reduce their risk for PAH.

Background

Symptoms of confusion and loss of short-term memory make the management of chronic conditions complicated for patients with impaired cognition and can lead to hospitalization that is preventable (Herbert, Weuve, Scherr, & Evans, 2013). It is estimated that by 2050, there will be approximately 14 million people diagnosed with Alzheimer’s and more than six million will be older than 80 years old (Herbert et al., 2013). These figures are alarming, and it requires an aggressive approach to minimizing PAH for this fragile population. Researchers have extensively discussed the health care disparities faced by patients with dementia (Huang et al., 2016; Lin et al., 2013; Zhu et al., 2014). Some health conditions reported as causes of PAH for patients with dementia include respiratory illness, heart disease, urinary tract infection (UTI), poor hydration, and chronic health conditions (Huang et al., 2016). Patients with dementia may have subtle changes in their health that make it difficult for their caregivers to identify health problems from the early onset of symptoms. Thus, it is crucial for caregivers to be educated about signs and symptoms that should be reported to increase early medical intervention and reduce PAHs. The health care cost for PAHs for dementia patients was approximately $259 billion in 2013, as documented in Medicare data (Huang et al., 2016). Forty-seven percent of the costs associated with PAHs were due to acute care conditions, and 53% of the cost was attributed to the treatment of chronic conditions for patients with dementia (Huang et al., 2016). In addition, the cost associated with providing care was approximately $342,000 per dementia patient from diagnosis until death (Alzheimer’s Association, n.d.).

Purpose

I created and implemented an educational training tool for caregivers working in ALFs to reduce PAHs for patients with impaired cognition. These patients usually have problems with memory, verbalizing their needs and concerns, and making appropriate decisions that can lead to worsening health conditions (Knapp et al., 2016). Systems should be developed and implemented in long-term care settings that help caregivers identify and report health concerns of patients with dementia in a timely manner to reduce PAH and delayed medical care. Timely and safe medical management of these patients will improve their health outcomes and lower their health care costs.

In this study, caregivers who were unlicensed care staff in ALFs received education on providing PCC related to the resident's individualized needs and preferences and on the importance of incorporating PCC using Kitwood's PCC concepts (Kitwood, 1997). Kitwood emphasized the importance of PPC for dementia patients, for whom the focus is more on providing care that is individualized and less on Alzheimer's disease. In addition, caregivers received education on using the service plan guidelines developed by the Maryland Department of Health and Mental Hygiene (DHMH) to meet the needs of ALF residents included in this study. The PCC concepts were used as a guide to help caregivers develop individualized care plans that may improve the health status of residents with impaired cognition. Thus, this educational training aimed to reduce PAHs by educating caregivers on the importance of reporting symptoms of worsening health conditions in a timely manner. Because caregivers in ALFs spend more time with their patients with dementia, they can be educated on the importance of reporting changes in behavior or physical conditions to the right person in a timely manner to reduce PAHs.

In addition, I implemented concepts of Malcolm Knowles's adult learning theory known as *andragogy* during the educational training to ensure that caregivers fully understood the purpose of incorporating PCC guidelines when assisting a resident with cognitive impairment (Knowles, Holton, & Swanson, 2015). I used the Quality of Life in Late-Stage Dementia (QUALID) questionnaire, a tool developed to identify the quality of life (QOL) scores for patients with impaired cognition. Caregivers completed the QUALID before and after the educational intervention (Weiner et al., 2000). I administered the Person-Centered Care Assessment Tool (P-CAT) to identify each caregiver's assessment of their level of PCC before and after the educational intervention (Edvardsson, Fetherstonhaugh, Nay, & Gibson, 2010). Edvardsson and other researchers developed the P-CAT to identify the PCC scores given by caregivers for patients with dementia before and after PCC training (Sjogren, Lindkvist, Sandman, Zingmark, & Edvardsson, 2012). With this tool, I assessed eight caregivers' beliefs about their own level of PCC and their residents' QOL. Four caregivers received PCC education and four did not. The results of the study helped determine if educational training improved the caregivers' understanding of the benefits of person-centeredness for patients with dementia. The caregivers were able to report the changes in their patients' physical or behavioral conditions in a timely manner, thus reducing the risk of PAHs and delayed medical care for patients with dementia.

It is imperative for administrators working in residential care homes to implement evidence-based strategies focused on managing the chronic conditions for patients with dementia to prevent PAHs. The QOL of patients with dementia should improve with timely identification and management of their illnesses.

Significance of the Problem

Presently, there is no known treatment to prevent or cure dementia. Alzheimer's disease has been documented as one of the chief causes of death in the United States for the elderly, and dementia caused by Alzheimer's is classified as an epidemic with no known cure or treatment to prevent or stop its progression (Matthews et al., 2019). Unfortunately, medications that were used in research studies to slow the progression of dementia have not been as successful when given to humans (Nelson & Tablet, 2015). Treatment modalities to delay the development of Alzheimer's are now focusing on the management of elevated blood pressure, diabetes, and weight reduction to improve patients' health status (Nelson & Tablet, 2015). Kim and Park (2017) reported that approximately 46.8 million people are diagnosed with cognitive impairment throughout the world, and there is an expectation by the year 2050 for the number to rise to 131.5 million. The increase in dementia cases throughout the world forces health leaders to develop strategies to reduce PAHs for patients with dementia utilizing whatever means necessary. Thus, timely management of chronic conditions will help to reduce the risk of worsening health conditions and PAHs for patients with dementia.

Researchers have extensively reviewed the health care disparity patients with dementia face (Lin et al., 2013; Zhu et al., 2014). Patients with Alzheimer's were hospitalized at a higher rate for worsened chronic conditions than those without Alzheimer's who had a similar diagnosis. Infections of the lungs and urinary tract were cited as two of the main health conditions that increased the risk of PAHs for patients with cognitive impairment (Bernardes et al., 2018). Typically, acute conditions can be treated effectively in the outpatient setting if they are managed in a timely manner. However, the caregiver must be able to acknowledge and report both the physical and behavioral changes of patients with dementia under their care in a timely manner to improve the patients' health outcomes.

Studies have shown that elderly patients with dementia caused by Alzheimer's are more inclined to be hospitalized for conditions that could have been managed appropriately by their primary care providers (Bernardes et al., 2018; Lin et al., 2013; Zhu et al., 2014). Medicare data in 2013 showed that approximately 370,000 hospital visits for patients with dementia were preventable (Huang et al., 2016). A study of patients with dementia showed that patients with late-stage dementia had a higher risk of hospitalization related to cognitive and functional impairments (Zhu et al., 2014). In addition, the researchers concluded that in comparison to patients without dementia, patients with dementia incurred higher Medicare costs and spent more time in the hospital (Zhu et al., 2014).

Timely medical intervention can prevent PAH and allow patients with dementia to receive treatment in their familiar environment and avoid the stressful environment of the hospital. Unfortunately, older people with impaired cognition have a higher incidence of hospitalization and increased health care costs compared to older people without dementia (Husaini, Gudlavalleti, Cain, Levine, & Moonis, 2015). Thus, delayed medical care can lead to PAHs and increased health care spending for these patients.

The environment in which these patients live may contribute to creating barriers that reduce their access to appropriate and effective health care (Camp, Bourgeois, & Erkes, 2018). For example, if administrators in long-term care settings do not provide education on the benefits of PCC that is individualized for each patient, the staff or caregivers may not learn the importance of reporting physical or behavioral changes in a timely manner. The lack of education about dementia care and the belief that aging is synonymous with a decline in mental and functional impairment has been cited as a barrier that may reduce access to effective PCC dementia care (Stephan et al., 2018). Presently, there are no clear recommendations for the best interventions to prevent PAH for patients who suffer from Alzheimer’s. Patients with dementia have unique needs and should be treated or assessed based on their abilities and not based on a standardized practice. In other words, all patients with dementia are not the same, and they should be treated based on their individual needs. To date, few researchers have identified and implemented direct interventions that reduce the risk of PAHs or improved health outcomes for patients with cognitive decline in residential settings (Alzheimer's Association, n.d.).

Collaborative care models have been utilized in residential care homes to improve health costs for patients with dementia by decreasing emergency room visits and PAHs (Alzheimer's Association, n.d.). Thus, the cost of health care spending for residents with a decline in their cognitive status could be lowered significantly if the rate of PAH is reduced. Implementation of a PCC model in residential homes may help with preventing PAHs for these residents. This PCC model could guide the development of an educational course to improve the caregiver's awareness of QOL issues for patients with cognitive impairment. Kim and Park (2017) reviewed multiple studies to identify how PCC affects patients with cognitive impairment and concluded that PCC education of caregivers helps to reduce agitation, mood disorder, and negative psychiatric behaviors of patients, leading to improved health status. The study showed a positive correlation between caregiver education and care management and improved health status of patients with impaired cognition (Kim & Park, 2017).

Each caregiver's approach to managing the daily needs of patients with dementia should be addressed because their care directly affects the standard of health for these patients. A caregiver's prejudices about dementia can contribute to inadequate care and poor health outcomes for these patients. Leaders in residential care homes need to take a stand and implement policy and procedural guidelines for their caregivers that emphasize the importance of reporting changes in their residents' condition in a timely manner.

Nature of Project

In this study, I created an educational intervention that provided guidelines for caregivers in residential homes to identify health concerns for residents under their care in a timely manner. I obtained the QOL scores and PCC scores as reported by the caregivers of the patients with Alzheimer's before and after the intervention. Quantitative measures were used to determine the caregiver's perception of their patient's QOL and PCC scores. I used the P-CAT to assess the levels of PCC that are practiced in ALFs as reported by caregivers providing care to residents with Alzheimer's (Edvardsson et al., 2010). This tool uses a scale with 13 items "formulated as statements about the content in care, the environment, and organization" (Sjogren et al., 2012, p. 2198). Higher scores on the P-CAT "indicate that the caregiver perceives a greater score for person-centeredness in a possible range of 13–65" (Sjogren et al., 2012, p. 2198). In addition, caregivers reported their residents QOL scores by using the QUALID questionnaire, which has 11 items "based on concrete, observable behaviors and emotions and low values indicate a higher QOL in a possible range of 11–55" (Sjogren et al., 2012, p. 2198).

In the PCC educational training, I included the health conditions identified on the discharge summary for dementia patients the year prior to the intervention. The education given included information on the pathophysiology of the health conditions identified as possible causes for PAHs. Caregivers received procedures that helped them identify and report worsening health conditions for residents with Alzheimer's. I hoped that caregivers who received the PCC training would report changes in the health conditions of their patients with dementia in a timely manner, reducing the number of PAHs. I evaluated the PCC and QUALID scores given by caregivers before and after the intervention to identify any meaningful difference between the means of the group that received the PCC education versus the group that received the usual DHMH training.

Research Question (PICO Format)

It is essential to formulate a well-developed research question that will provide the foundation for implementation of a project that is evidence-based. The research question chosen for this study was, Do caregivers in residential homes who have been trained with PCC dementia care management guidelines report changes in the health conditions of residents with Alzheimer's to reduce PAHs earlier than caregivers who were not trained with the PCC dementia care management guidelines? Below is a summary of what each element of the PICO format means:

Population: Caregivers in senior homes who work with residents who have cognitive decline due to Alzheimer's.

Intervention: Educational guidelines for caregivers combining PCC concepts with DHMH service plan guidelines.

Comparison: Caregivers who received educational training with PCC dementia care management guidelines versus caregivers who were not trained with dementia care management guidelines and received the usual DHMH training.

Outcome: Improved resident QOL and caregiver person-centeredness with timely reporting of health problems and reduction of PAHs for patients with dementia.

Kitwood's PCC Conceptual Model

I used the PCC concepts created by Tom Kitwood (1997), a psychologist and leader in dementia care, to develop an educational course that would guide the caregivers in providing individualized care to improve the health outcomes for patients with cognitive decline. The term *personhood* is used to describe “the standing or status bestowed upon one human being, by others, in the context of relationship and social beings” (Kitwood, 1997, p. 8). When caregivers do not acknowledge the personhood of patients with cognitive impairment and treat them disrespectfully, the patients may display behaviors that enhance the symptoms of dementia (Kitwood, 1997, p. 14). Kitwood (1997) reported that often personhood can be disregarded, particularly when the “patients cannot easily speak in support of their own interest” (p. 43). I used the patient-centered model to identify staff behaviors that negatively impacted the behaviors of patients with dementia and developed a plan to improve their attitudes and treatment effectiveness. Kitwood used the term *malignant social psychology* to describe harmful negative behaviors that are “deeply damaging to personhood” (Kitwood, 1997, p. 46). Kitwood (1997) identified 17 terms to describe malignant social psychology that caregivers use unintentionally to undermine the personhood and well-being of the person with impaired cognition. I outlined these behaviors in my educational course to help the caregivers gain a better understanding of how their actions could worsen the behaviors associated with dementia for their patients. Patients with dementia can thrive in an environment that provides individualized care and is supportive (Kitwood, 1997).

In addition, Kitwood (1997) identified five psychological needs for patients with dementia—comfort, attachment, inclusion, occupation, and identity—and identified 12 positive methods of caregiver interaction with Alzheimer’s patients to enhance patients’ well-being and personhood. In this study, the educational intervention contained strategies for implementing the 12 positive PCC concepts by acknowledging that all persons are special and should receive individualized care based on their needs (Kitwood, 1997). Kitwood (1997) reported that if the caregiver "brings an open, unprejudiced attitude, free from tendencies to stereotype or pathologize, and meets the person with dementia in his or her uniqueness," the personhood of the patient with dementia will be enhanced (p. 119). Because caregivers are the primary providers of care in an ALF and spend more time with patients with dementia, they can benefit from receiving training to identify symptoms or changes in the behavior of these patients.

Malcolm Knowles's Andragogy Theory of Adult Learning

I used Malcolm Knowles's theory for adult learners to educate the caregivers on Kitwood's PCC concepts. Knowles et al. (2015) developed guidelines to teach adult learners based on what Knowles called the theory of andragogy. Knowles recognized that adults learn differently from younger people. Adult learners require a different approach to learning so that they can understand and practically utilize the information that is being taught (Knowles et al., 2015). Knowles acknowledged that adult learners have different reasons for learning, including progress and growth in institutional, social, or personal life. Moreover, differences in situation, personal life, or topics being discussed can affect adult learners' ability to learn (Knowles et al., 2015). The theory of andragogy has six principles to analyze and identify the type of learner the educator is working with to help implement education based on adult learners' needs for effective learning (Knowles et al., 2015). The six core principles of andragogy are as follows:

- The first principle states that the learner "needs to know" the reasons for learning before learning takes place (Knowles et al., 2015, p. 44).
- The second principle recognizes the learners' "self-concept," or ability to take initiative (Knowles et al., 2015, p. 44).

- The third principle occurs when the learner is given the opportunity to utilize “prior experience” during discussions (Knowles et al., 2015, p. 44).
- The fourth principle states that “readiness to learn” occurs when the learner can be driven by life changes to learn (Knowles et al., 2015, p. 45).
- The fifth principle states that “orientation to learning” occurs when the learners learn through problem-solving or completing a task (Knowles et al., 2015, p. 46).
- The sixth principle states that “motivation” occurs through “internal” or “external” factors that drive adult learners to learn (Knowles et al., 2015, p. 47).

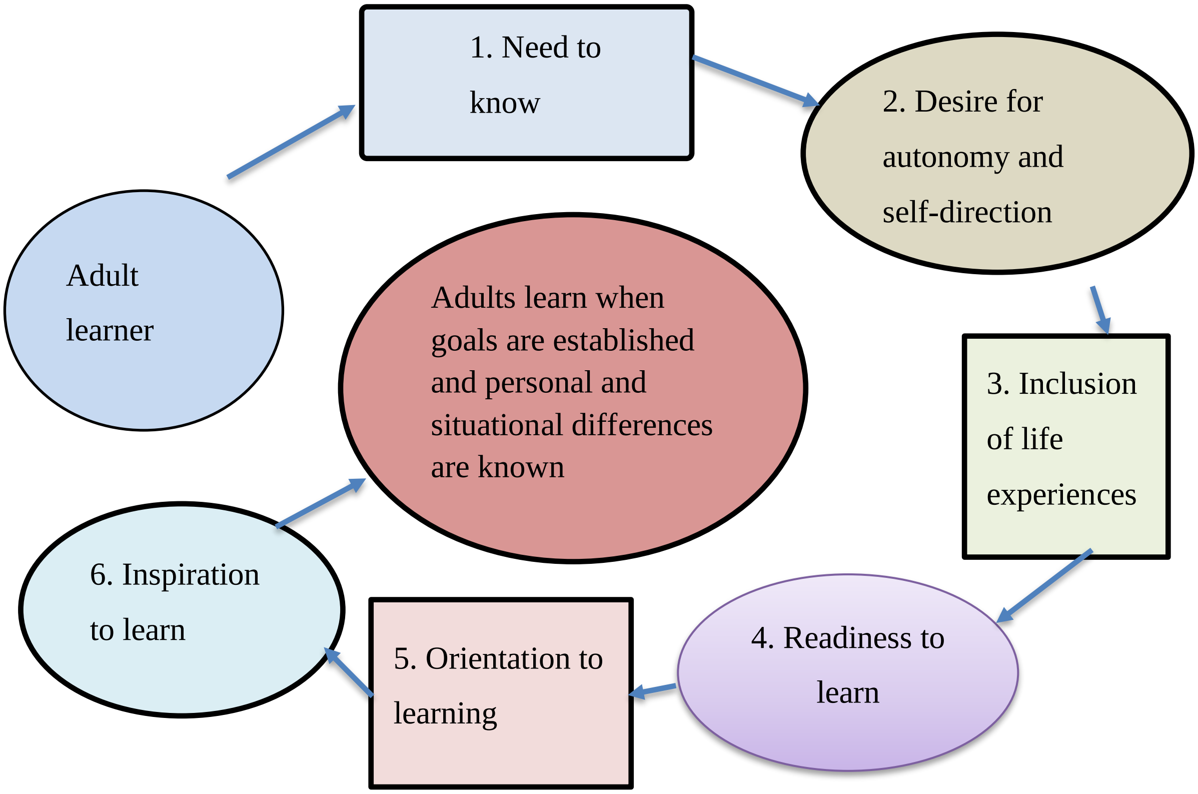


Figure 1. Knowles's six principles for adult learning. Adapted from *The Adult Learner* (8th ed.; p. 80), by M. S. Knowles, E. F. Holton, and R. A. Swanson, 2015, New York, NY: Routledge. Copyright (2015) by Taylor & Francis Group. Adapted with permission.

The adult learner's rationale for learning is based on "individual, institutional or societal growth" (Knowles et al., 2015, p. 80). In other words, the adult learner must feel the drive to learn new information based on what they will gain. In addition, the adult learner will learn when they understand the "subject matter differences," "individual learner differences," and "situational differences" (Knowles et al., 2015, p. 83). For example, the adult learner environment affects their ability to learn based on the topic that is being taught, the location of the lesson, and their personal experience. These differences in learning need to be addressed before learning takes place for the adult learner (Knowles et al., 2015).

Operational Definitions

Caregiver. A caregiver is an unlicensed person, older than 18 years old, who is trained according to Maryland DHMH guidelines to assist residents in ALFs with their activities of daily living.

Dementia. Dementia is loss of memory, functional status, impaired judgment, and difficulty speaking or understanding a language (Thies & Bleiler, 2013).

Person-Centered Care Assessment Tool (P-CAT). The P-CAT is a questionnaire that is used to identify caregivers' perceptions of "organizational support," "environmental accessibility," and "the extent to which care is personalized" for residents with impaired cognition (Edvardsson et al., 2010, p. 106).

Person-centered care (PCC). PCC is individualized care that is given to a person in the health care industry that is based on their personal preferences (Kogan, Wilber, & Mosqueda, 2016).

Personhood. Personhood is a concept defined as "a standing or status that is bestowed upon one human being, by others, in the context of a relationship or social being" (Kitwood, 1997, p. 8).

Potentially avoidable hospitalization (PAH). PAH refers to unnecessary hospitalization for conditions that could have been treated effectively in an outpatient setting (Segal et al., 2014).

Quality of life (QOL). QOL refers to timely and appropriate management of health conditions for patients, leading to improved health outcomes.

Service plan. A service plan is the care that is planned and documented by a designated employee in an ALF for a resident upon admission to an ALF in Maryland.

Scope and Limitations of This Study

This project included caregivers who were employed in three ALFs in Maryland. The participant sample was a convenience sample and was not randomized, using less than 20 participants due to the smaller size of and low census in these facilities.

Summary

In this chapter I discussed the problem of PAHs and delayed medical treatments for residents residing in ALFs who are cognitively impaired due to Alzheimer's. Studies have shown that many factors can affect the PAHs for these patients. It is recommended that these patients be acknowledged and respected to improve their health outcomes and well-being (Mitchell & Agnelli, 2015). In this study, the caregivers received PCC education to be more aware of and proactive in recognizing health problems that may cause PAHs for residents with dementia.

Chapter 2: Literature Review

This chapter provides a literature review that addresses the important factors that relate to the QOL of patients with dementia: (a) increased risk of PAH, (b) barriers to achieving a better QOL for patients with dementia, (c) benefits of dementia care training, (d) benefits of including PCC concepts with dementia training guidelines, (e) theoretical framework, and (f) rationale for choosing the PCC conceptual model and the P-CAT and QUALID instruments.

Research Strategies

In the literature review I identify and discuss studies in which researchers have identified or implemented successful care-management educational tools to improve patient outcomes for patients with dementia living in ALFs. In addition, I discuss research in which researchers sought to identify factors that increase the risk of delayed medical care and PAHs.

A PubMed Clinical Queries search was useful in acquiring a lot of relevant studies and data that answered my clinical questions. When I used the traditional PubMed search, it did not generate articles that were related to my research question. Most often, the articles were about the various treatment modalities for patients with Alzheimer's or were not related to my question of interest. But I searched the following keywords in PubMed Clinical Queries and found much pertinent and useful research: *patients with dementia and PAHs*, *patients with Alzheimer's and care management guidelines*, *improved patient outcomes*, *patients in residential homes with a decline in cognition*, and *improved QOL with dementia care*. However, I did not use many of these studies because they did not address the factors that improve patient outcomes or QOL for patients with cognitive impairment. I retrieved more than 35 articles that were relevant to this project using keywords such as *dementia*, *care management guidelines*, *quality of life*, and *person-centered care*. However, only 25 articles were related to my research questions. I used the Turning Research Into Practice (TRIP) database to identify research studies by using key terms, but it did not generate a lot of relevant research articles. CINAHL, provided by EBSCO, was very helpful in locating research materials that could be used for the development of the care management training tool. CINAHL was also helpful in identifying a few studies that were done on the risk of PAHs for patients with dementia. Unfortunately, some of the articles were not appropriate because they were older than five years. The articles older than five years that were included in this project showed the relevance of PCC education for caregivers in ALFs or nursing homes. In addition, the articles had recommendations for future studies that would be appropriate for studies designed to improve the health status of patients with dementia.

PAHs and Delayed Medical Care

There are many factors that may contribute to PAHs for patients with cognitive impairment who reside in ALFs and nursing homes. A study utilizing a “cross-sectional analysis of Medicare claims data” for approximately 195,000 elderly patients age 65 and older identified risks for PAH for those with “Alzheimer’s disease and related dementias” (ADRDs; Lin et al., 2013, p. 34). Medicare beneficiaries with ADRDs spent more money and stayed in the hospital longer than patients without ADRDs for similar chronic conditions. High blood pressure and diabetes were two conditions identified to cause PAHs for ADRDs in this study. Lin et al. (2013) reported that the study results did not provide a clear explanation of how ambulatory care management could influence PAH. They recommended future studies to identify health conditions that could be treated in outpatient settings to decrease PAHs and health care costs and concluded that patients with ADRDs were more susceptible to PAH from worsening conditions from diabetes and hypertension than patients without ADRDs. They argued that a comprehensive plan of care should be implemented to manage patients with cognitive impairment who have multiple chronic conditions. Thus, dementia care guidelines should help with early identification of conditions that may become uncontrollable for patients with dementia, leading to PAHs.

Lin, Zhong, Fillit, Cohen, and Neumann (2017) analyzed Medicare data for patients who were diagnosed with ADRDs to determine the risk for PAH and concluded that 1 in 10 patients with ADRD was hospitalized unnecessarily. Hospitalizations for respiratory or urinary tract infections that could have been avoided were classified as ambulatory care sensitive conditions (ACSCs) with early intervention in outpatient settings (Lin et al., 2017). Most importantly, there were more than 409,000 patients with ADRD who were hospitalized for an ACSC, costing approximately $5 billion. This study was important to my project because it identified possible causes for PAHs for patients with dementia. In addition, patients with impaired cognition in this study were more likely to be hospitalized for chronic health issues that could have been treated successfully in outpatient settings. The study results indicated that there are issues with care management of chronic conditions for patients with dementia that lead to PAHs and readmissions. Although the study findings did not identify any specific recommendations to reduce PAHs for patients with dementia, they emphasized the need for early identification and treatment of chronic conditions (Lin et al., 2017).

Researchers in Portugal showed that from 2000 to 2014, the admission rate for patients with dementia increased approximately fivefold (Bernardes et al., 2018). Patients in the study spent approximately eight days in the hospital. The results indicated that patients with cognitive impairments were admitted frequently for infections of the lungs or urinary tract in Portuguese public hospitals. The most common chronic conditions identified in this study were strokes, type 2 diabetes, and heart failure from congestion (Bernardes et al., 2018). Unfortunately, mortality rates were as high as 16%. At the conclusion of this study, the investigators emphasized the need for timely intervention in managing health conditions for patients who cannot verbalize their needs.

Husaini et al. (2015) researched the risk and cost of hospitalization for patients age 65 or older, with and without dementia. The results indicated that patients with cognitive impairment had a higher incidence of high blood pressure and uncontrolled diabetes, leading to stroke and increased health care costs (Husaini et al., 2015). The researchers concluded that diabetes and high blood pressure should be managed vigorously to prevent or decrease PAHs and reduce health care costs for these patients, who spent approximately $7,000 more on health costs and spent twice as much time hospitalized than patients without dementia (Husaini et al., 2015). The fact that the investigators looked at the ethnicity and sex of the participants to identify the disparities in dementia care strengthened this study. This study result could not be generalized because the study was conducted using hospital discharge records. In addition, the study did not use clinical data, only information on ethnicity and sex. However, the findings of the study emphasized the importance of implementing strategies to reduce the risk factors for PAH based on a dementia patient’s ethnicity and sex to reduce PAHs.

Dementia Stages and Risk of Hospitalization

Knapp et al. (2016) studied hospital admissions for patients with impaired cognition living in London ALFs. They concluded that hospital admission rates for patients with severe dementia were almost twice the rates of those with moderate dementia and doubled when compared to patients with mild dementia (Knapp et al., 2016). In addition, the study results showed that 60% of patients with cognitive impairment had risk factors for cerebrovascular accidents and 80% had risk factors for high blood pressure (Knapp et al., 2016). More importantly, they cited diabetes and hypertension as two predictors of hospitalization for patients with cognitive impairment. Although this study reported that it was less expensive to keep these patients in ALFs, the results also indicated that they had higher risk for multiple chronic conditions, longer hospital stay, and increased number of hospitalizations. The weakness of this study was that the researchers did not mention the use of care providers in the ALFs. Although this study did not report on PAH for patients with impaired cognition, the results showed that they experienced higher rates for hospital or nursing home admission because of their comorbidities (Knapp et al., 2016).

Huang et al. (2016) used Medicare data in 2013 for patients with ADRDs age 65 or older to determine the risk of PAH for ACSCs, such as bacterial lung disease and UTIs. The results indicated that approximately 370,000 hospitalizations, with a cost of almost $3 billion in Medicare expenditures, were preventable for patients if they were treated appropriately in the outpatient setting. In addition, patients with more advanced stages of dementia had a higher rate of comorbidity and unnecessary hospitalization (Huang et al., 2016).

Zhu et al. (2014) conducted a prospective cohort study of Medicare beneficiaries who participated in the Washington Heights–Inwood Columbia Aging Project (WHICAP) for 18-month periods until they left the study or died. Zhu et al. examined the risk of hospitalization for different causes, admissions from ACSCs, length of hospitalization, and costs associated with the hospitalization of patients. The results showed that in comparison to patients who were not diagnosed with dementia, patients with dementia were hospitalized more frequently for UTIs and dehydration. Those patients with severe functional impairment were admitted for UTIs and uncontrolled diabetes more often than patients without dementia. In addition, patients with more advanced cognitive impairment were at higher risk for hospitalization from uncontrolled diabetes, high blood pressure, bacterial pneumonia, and dehydration (Zhu et al., 2014).

Zhu et al. (2014) also demonstrated that functional and cognitive impairment were risk factors for hospitalization, more days spent in the hospital, and increased health care spending for patients with Alzheimer's. Participants from different ethnic and cultural backgrounds were included in the study to determine their risk of hospitalization, which helped to strengthen the study. The study occurred over a 10-year span using data from the clinical setting. This study was especially useful as researchers in other studies looked at Medicare data for shorter periods to evaluate the risk of PAHs.

The study by Zhu et al. (2014) was important for my project because it focused on specific factors such as functional and cognitive impairment to determine if these factors were significantly related to the risk of PAHs for dementia patients. The findings for this study were helpful in the development and implementation of the dementia care management guideline used in the current study. These types of studies are important because multiple health conditions among older adults with dementia may be a factor in their high mortality rate (Zhu et al., 2014).

Barriers That Contribute to PAHs

Resistance to change was identified as a barrier for PCC implementation in residential care homes (Camp et al., 2018). Camp et al. (2018) explained in detail the importance of letting dementia patients make choices based on their needs and preferences. The researchers also argued that residential care home administrators should create an environment that is supportive of equal treatment and rights for patients with dementia. In other words, every patient should be treated respectfully regardless of their cognitive status (Camp et al., 2018).

Researchers have shown that barriers associated with dementia care could be reduced or prevented if the caregivers who work in residential care homes received PCC education that helped them to improve their knowledge, understanding, and attitudes toward these patients (Stephan et al., 2018). Caregivers working in residential homes should be taught the importance of being proactive in identifying possible health problems for their dementia patients who can no longer verbalize their needs effectively (Stephan et al., 2018). The researchers reported that education on dementia care using PCC concepts helped to eliminate or reduce the stigma associated with residents who experienced a decline in their cognitive status. Bringing awareness through education on the stigma and prejudices associated with effective dementia care in residential care homes helps improve access to the current health care system. In the current study, the caregivers were given the opportunity to evaluate their own personal beliefs and make the necessary changes to embrace the concepts of PCC.

A retrospective study was done on a group of caregivers to evaluate the guidelines that they were using to provide care to older patients living in residential care facilities; the results indicated that those patients with cognitive impairment were more at risk for receiving substandard care than those without cognitive impairment (Sivananthan, Lavergne, & McGrail, 2015). Patients with dementia received care that was not based on the best evidence-based treatment protocols. Sivananthan et al. (2015) investigated the type of testing, examination, counseling, and referral used by the specialist to see if the patients were receiving substandard care and concluded that the elderly patients with cognitive impairment were more at risk for receiving inadequate medical care based on the stigma associated with old age. Caregivers may ignore behavioral or physical changes in the health conditions of elderly dementia patients, labeling these changes as normal problems associated with old age, and not seek medical care for them. Ignoring changes in patients with dementia may lead to PAHs. The researchers argued for the development of care management guidelines and education on the standard of care that would improve health outcomes for a patient with impaired cognition (Sivananthan et al., 2015). They urged that long-term care settings should incorporate training to ensure that patients with dementia are given appropriate and effective treatment and long-term care (Batsch & Mittelman, 2012).

Evidence-Based Practice: Verification of Chosen Option

Some studies have used care management education guidelines for caregivers to measure the perceived benefit for patients with dementia. Moyle et al. (2016) measured the difference between the care of caregivers who had received the capabilities model of dementia care (CMDC) and those who had received regular care training in residential care homes for patients with impaired cognition. The results revealed that family members reported lower QOL scores for their cognitively impaired relative whose caregivers did not receive the CMDC training, whereas families of the patients who had received the CMDC intervention reported higher QOL scores (Moyle et al., 2016).

A feasibility study was done to determine the benefit of training certified nursing assistants (CNAs) via the Internet about dementia care using a care management program called CARES (Hobday, Savik, Smith, & Gaugler, 2010). The CARES model emphasizes concepts such as connecting with the patients, assessing the changes in health conditions, responding to the needs appropriately, and evaluating and sharing by communicating the health concerns with team members. The CARES study results indicated that the CNAs' care knowledge of patients with dementia improved markedly with the Internet training program (Hobday et al., 2010). The caregivers reported that the CARES protocol improved their knowledge and skills in providing the best care, which helped to improve the demands associated with providing care for patients with impaired cognition (Hobday et al., 2010). Although the training for dementia care was conducted via the Internet, the results indicated that the CARES program utilized time and money effectively to educate caregivers in residential care homes. The success of the CARES program indicated that caregivers can be receptive to PCC educational training.

Evidence-Based Practice Model

The P-CAT tool identifies PCC practices in residential care homes as reported by caregivers. This tool uses a scale with 13 items "formulated as statements about the content in care, the environment, and organization" (Appendix E; Sjogren et al., 2012, p. 2198). The higher scores on the P-CAT show an indication that the caregiver perceives a higher level of "person-centredness in a possible range of 13–65" (Sjogren et al., 2012, p. 2198). QOL was evaluated with the QUALID scale (Appendix E; Weiner et al., 2000, p. 114). The QUALID scale contains 11 items such that "low values indicate a higher QOL in a possible range of 11–55" (Weiner et al., 2000, p. 114). Most importantly, the QUALID scale was developed to help care staff identify QOL for their patients with dementia.

Li and Porock (2014) looked at more than 20 studies that were conducted on PCC for patients with dementia who resided in residential care homes and found that the patients who received care from caregivers trained in PCC showed improvements in “decreasing behavioral symptoms” (p. 1). This study showed the benefit of PCC education for caregivers of patients with cognitive impairment. The results of the Li and Porock study educated caregivers on the importance of reporting all changes in behavior and physical condition of their residents with dementia. Li and Porock (2014) did not mention the improvement in the physical condition of patients with dementia after PCC education. Thus, in the current study, I encouraged caregivers to identify underlying causes for sudden changes in health conditions for patients with dementia to improve the timely care management of their health conditions and prevent PAHs.

Terada et al. (2013) utilized questionnaires to assess PCC and QOL for hospitalized patients and those in residential care settings. The researchers looked at “the relationship of care characteristics to the quality of life (QOL) of dementia patients in long-term care facilities” (Terada et al., 2013, p. 103). They reported that “dementia care characteristics and the QOL of dementia patients are significantly interrelated, especially” in long-term care settings (Terada et al., 2013, p. 103). For example, if the caregiver believed it was acceptable for the patient to choose their own clothing, the score for QOL would be high for that dementia patient. They concluded that if the care for patients with cognitive impairment improved, their QOL would also improve (Terada et al., 2013). In the current study, the PCC education the caregivers received advocated individualized care for patients with dementia based on their individualized needs to improve their treatment and care.

Rationale for Choosing the PCC Model and Instruments P-CAT and QUALID

PCC has been documented in the literature as a crucial part of care management for patients with cognitive impairment. A randomized control study of patients with impaired cognition found that those who resided in PCC facilities or “person-centered environments” (PCE) showed an improvement in “agitation” and “quality of life” in comparison to those care facilities with dementia residents receiving little or no PCC (Chenoweth et al., 2014, p. 1147). Specifically, the patients who were living in care homes where PCC and PCE were implemented showed improvement with nervousness and anxiety compared to residents whose environments were not changed to increase socialization or safety or whose caregivers were not trained to provide PCC. Thus, PCC education for caregivers of patients with cognitive impairment could affect patients QOL positively. The study results indicated some of the residents displayed better QOL scores and attitudes toward care provided as reported by caregivers than the residents who received a combination of a PCE and PCC intervention (Chenoweth et al., 2014, p. 1147).

Edvardsson and Innes (2010) compared PCC tools that were used in previous studies to measure PCC for patients with dementia. They reported that the P-CAT instrument was easier for the caregivers and it required less training when compared with other tools that measured PCC. According to Terada et al. (2013), the QOL should be measured because it is an essential measurement of quality of care provided to patients with impaired cognition. They argued that more studies are needed to identify the factors that improve PCC care and the QOL of dementia patients in residential care homes (Terada et al., 2013). They used the QUALID tool to measure the QOL scores of residents with impaired cognition whose caregivers had received the educational course in PCC.

Evidence-Based Studies Using the P-CAT and QUALID Tools

Sjogren et al. (2012) used cross-sectional research design in Swedish residential care facilities to identify the factors that affect PCC perceptions and improved health outcomes for

Alzheimer’s residents and the results indicated PCC training of caregivers was effective. The study involved approximately 1,270 residents and 1,170 staff from more than 150 wards where dementia patients resided (Sjogren et al., 2012). The researchers used the P-CAT instrument to measure PCC scores; the results showed that those residents residing in units with PCC-trained caregivers received higher PCC scores and had better QOL scores (Sjogren et al., 2012). They reported that the PCC scores of caregivers were related to the patient’s ability to perform their daily routine and their health status, concluding that “there seems to be a relationship between person-centredness, resident’s ability to perform activities of daily living (ADL), and resident’s quality of life” (Sjogren et al., 2012, p. 2196). They used the QUALID instrument to measure QOL, which entailed “observed behaviors and emotions” reported by caregivers about dementia patients (Sjogren et al., 2012, p. 2198). The results indicated that “the residents in more person-centered facilities had better ability to conduct daily living activities such as eating, drinking, and toileting” (Sjogren et al., 2012, p. 2200).

A Chinese version of the P-CAT tool was used in China to assess PCC scores in residential care settings. Results indicated that “individualized care,” “organizational support,” and “environmental accessibility” were identified factors that affect the caregiver’s PCC scores and their perception of the residents with dementia (Zhong & Lou, 2013, p. 952). The Chinese P-CAT tool took into consideration some cultural differences between the caregivers and the care home residents.

Advantages and Disadvantages of the P-CAT and QUALID

The P-CAT includes only 13 items to calculate levels of PCC, which makes the tool easier to use (Sjogren et al., 2012; Zhong & Lou, 2013). Zhong and Lou (2013) reported that the

Chinese version of the P-CAT result indicated that it was a reliable and valid tool to measure PCC in the facilities that provided care to the elderly. Edvardsson and Innes (2010) stated that "the strength of the tool is that it is short, concrete, and covers central areas of person-centered care such as the content of care, the organization, and the environment" (p. 842). The disadvantage of the P-CAT is that the results are subjective, based on caregiver beliefs. Edvardsson and Innes (2010) reported that the weakness of the tool was the poor response on the questionnaires in the development phase of the tool. Also, one of the "subscales" used to measure PCC "failed to meet the . . . Cronbach's alpha cutoff (0.7)" (p. 842).

The advantage of using the QUALID instrument is that it is a tool that is proven to be effective with measuring the factors that may affect QOL for people with impaired cognition who are unable to verbalize their needs (Weiner et al., 2000). The disadvantage of the QUALID is that a proxy (the caregiver) is used to assess the patient's QOL. Like the P-CAT, the QUALID tool relies on the subjective perceptions of caregivers (Bowling et al., 2015).

Goals, Objectives, and Expected Outcomes for PCC Concepts

PCC concepts are an essential model that guided my research study and provided the solutions that could potentially improve the health status of residents with impaired cognition. I used Kitwood's (1997) PCC concepts to develop an educational course for the caregivers to improve PAHs and individualized care for cognitively impaired residents. The P-CAT tool was used to identify PCC as reported by caregivers, and the QUALID instrument was used to measure QOL scores as reported by participant caregivers. In the PCC education session, they were taught the strategies for implementing Kitwood's 12 positive methods to guide the PCC. Kitwood (1997) argued that if the caregiver "brings an open, unprejudiced attitude, free from tendencies to stereotype or pathologize, and meets the person with dementia in his or her uniqueness," the personhood of the dementia patient will be enhanced (p. 119).

Kaisey et al. (2012) studied factors that influence acceptance and intervention of care management guidelines by randomizing caregivers to receive dementia care management guidelines and routine care. The results indicated that it was easier for caregivers to participate with care management guidelines if dementia patients were living in the same facility, had milder cases of dementia, or multiple comorbid conditions (Kaisey et al., 2012). Moreover, the researchers reported that caregivers' perceptions of the needs of dementia patients may have influenced the caregivers' acceptance of dementia care guidelines. Thus, research has shown that to improve the health outcomes and adoption of PCC guidelines for residents with Alzheimer's in residential care homes, it is important for caregivers to be educated on the importance of being proactive in identifying changes in the chronic health conditions of these patients

Goals, Objectives, and Expected Outcomes for Knowles's Adult Learning Theory

Knowles developed the theory of andragogy, a set of guidelines to teach the adult learner (Knowles et al., 2015). Knowles et al. (2015) recognized that adults learned differently than younger people and required a different approach to learning. His six principles of andragogy were used to analyze the adult learners before implementing the plan of care for dementia patients residing in ALFs. According to the first principle of andragogy, adult learners need to understand the rationale for learning new information before choosing to learn it (Knowles et al., 2015). Thus, in my study, caregivers were taught the benefits of PCC education, including the reasons for the implementation of the care guidelines using Maryland DHMH service plans. In addition, caregivers were educated on the benefits of providing care based on the needs of dementia patients to reduce PAHs or worsening health conditions. The second principle of andragogy states that adult learners should be involved in the development and assessment of their education (Knowles et al., 2015). In other words, the adult learner should be encouraged to be interactive during an educational session instead of just listening to the educator.

The third principle of andragogy states that it is important for the adult learner to use the knowledge they have gained from daily living, which includes cognizance of errors they have made to improve their learning experience (Knowles et al., 2015). In my study, as the course progressed, caregivers were asked to share their experiences in dementia patient care to identify challenges and expectations for care management guidelines.

The fourth principle of andragogy states that adults learn best when they have to deal with an issue in their life or if they have to complete a required task (Knowles et al., 2015). In the current study, caregivers were asked to identify and communicate a plan of care for dementia patients with various health conditions to keep in line with this principle. Knowles et al. (2015) argued that the adult learner learns best when the lesson is focused on solving a problem rather than just learning about new guidelines for a training session.

The fifth principle of andragogy states that the adult learner needs to have a “subject-centred orientation to learning; they see learning as acquiring subject matter-content” (Knowles et al., 2015, p. 43). Knowles et al. (2015) further explained this principle by stating that adults learn best when they understand that the educational sessions will help them with their job performance. In relation to my study, this meant that caregivers understood that the training would improve the health status of residents under their care.

The sixth principle states that adult learners may become inspired by “external” factors such as increased pay or “internal” factors such as “self-esteem” (Knowles et al., 2015, p. 183). I offered a certificate to each participant after completion of the educational session to motivate them both internally and externally.

The learning style of the caregiver must also be considered when they are being taught person-centered dementia care. Knowles’s andragogy theory also states that adult learners learn best by understanding the rationale for learning, feeling an inner drive to learn, knowing that they have a choice to learn, feeling that is acceptable to use their skills or knowledge, and being allowed to make decisions on how they are trained (Knowles et al., 2015). Because all adults learn differently, the educational course for dementia training should incorporate different learning styles. I incorporated Knowles’s andragogy theory for the adult learner with a person-centered dementia training course for caregivers, using the DHMH service plan that helped them create a plan of care based on patients with cognitive impairment and individualized needs. Because the adult learner utilizes their experience to learn, all effort was made to ensure that the caregiver’s experience was included with accomplishing their goals. In addition, the successful adult learner should be involved with developing and reviewing the trainer’s lesson plans to move them from being “dependent to self-directing learners” (Knowles et al., 2015, p. 44). Thus, the caregivers, in collaboration with their assisted living supervisor, reviewed the service plan for their dementia patients. The adult learner should work in a setting in which they are not fearful of punishment when they make errors and in which they are comfortable with verbalizing and correcting their mistakes (Knowles et al., 2015). In the current study, caregivers had the opportunity to discuss the needs of dementia patients based on their health conditions.

Caregivers were also trained to provide individualized care to dementia patients using the service plan regulated by Maryland DHMD. This plan is recommended for all ALFs in Maryland and takes into consideration the patient’s medical and mental diagnosis, type of service, the time frame for service, and the service provider. The service plan also includes an assessment of the personal, behavioral, spiritual, emotional, and social concerns of assisted living residents. The background of the residents, their likes and dislikes, and their current daily routine are documented for each patient who is residing in the ALF. I gathered this information to develop PCC for patients with cognitive impairment.

Summary

This chapter has focused on evaluating studies of the factors that affect QOL scores for patients with dementia: (a) increased risk of PAH, (b) barriers to achieving a better QOL for patients with dementia, (c) benefits of dementia care training, (d) benefits of including PCC concepts with dementia training guidelines, (e) theoretical framework, and (f) rationale for choosing the PCC conceptual model and the P-CAT and QUALID instruments. Studies have shown that timely care management of patients with cognitive impairment helps to reduce PAHs. Although research studies were done on the risk of avoidable hospitalization, no studies on the implementation of strategies to reduce PAHs utilizing caregivers were found or reviewed. This research project should help to provide a greater understanding of the caregiver’s role with early identification of physical and behavioral changes in their residents with cognitive impairment to reduce PAHs.

Chapter 3: Research Method

This chapter describes the methodology that was used to conduct this scholarly project and includes discussion of the following: purpose, design, data analysis, measurement and instruments, data collection, methods, feasibility and appropriateness, IRB approval and process, risks and benefits, project site and participants, a cost-benefit analysis, and a timeline. It also discusses the methodology used to obtain data on caregivers' perceptions of PCC and QOL of patients with impaired cognition caused by Alzheimer's pre- and post-intervention using education on dementia care management guidelines.

Purpose

PCC guidelines have been used in residential care homes to improve the QOL for patients with impaired cognition. This project utilized the PCC concepts developed by Kitwood (1997) to educate caregivers on the benefits of providing care that is individualized for these patients. The goal of this study was to reduce PAHs for dementia patients by improving the timely management of their health care needs. I analyzed the data collected from this study to determine the effect of PCC dementia education with caregivers who received PCC education versus caregivers who did not and their perceptions of their level of PCC and the QOL of dementia patients under their care. The results of this project should help to identify factors that may or may not contribute to PAHs for patients with dementia.

Design

Through this project, I developed guidelines to improve the QOL of and timely care management for residents with impaired cognition who are living in residential care facilities. A quantitative study design was used to obtain the QOL and PCC scores as reported by caregivers before and after the PCC educational intervention. A *t* test was used to see if there was a difference between the means of the intervention group that received PCC education and the control group that received the usual DHMH training for ALF caregivers. The QUALID tool was used to determine the caregivers' perceptions of each patient's QOL, and the P-CAT instrument helped to explain the level of PCC they offer their dementia patients.

During the first week of the project, prior to the PCC educational intervention, I gave caregivers the PCC and QUALID tool to identify the person-centeredness of their dementia patients and their QOL scores. Caregivers who received the intervention were educated on the pathophysiology of health conditions such as hypertension, diabetes, congestive heart failure, pneumonia, and UTIs, which were cited in the literature as common causes for PAHs for dementia patients. The education was interactive, utilizing the principles of Knowles's adult learning theory. The PCC educational guideline included policies and procedures to manage health conditions for patients admitted to assisted living homes. The caregivers were educated on the importance of following the parameters that were documented by the nurse to monitor the health conditions of patients with cognitive impairment upon admission to the assisted living home. For example, all residents admitted with hypertension have parameters set to monitor blood pressure, including the frequency for monitoring their vital signs. Caregivers who were trained with PCC education, as well as those who received the usual training, received guidelines about the person to be notified, including the time frame if readings were not within the normal limit. The PCC educational training included policies that were developed and implemented based on the needs and preferences of dementia patients as recommended by Kitwood's (1997) PCC concepts. For example, if any dementia patient with dementia refuses to have their blood pressure checked, they should be offered the choice to have it done at another time. Caregivers were trained to be respectful of the preferences of their dementia patients and to allow them to participate in their care.

The caregivers who completed the PCC training should have been able to verbalize the benefits of providing individualized care based on their residents' preferences and needs. Before developing the PCC care guidelines, I reviewed the electronic medical records from May 2018 to April 2019 for all three assisted living homes to document the diagnoses from the discharge summary of residents who were hospitalized for conditions that could have been treated effectively by their primary care providers in their own home. Most importantly, I used the information collected for the most common conditions leading to PAHs to develop dementia care guidelines. The PCC dementia care guidelines were used to educate caregivers on early identification of worsening health conditions for dementia patients. I recorded and reported as chronic or acute care conditions the health conditions that were identified with the review of the electronic medical records. I did not include the timely medical care provided by the primary care provider in the community.

Data Analysis

I analyzed the PCC scores reported by caregivers who received dementia care management guidelines and the PCC scores reported by caregivers who did not receive dementia care management guidelines using *t* tests to identify differences between the group that did not receive PCC training and the group that did. The mean scores determined if there was a difference before and after the PCC education intervention. If the data results indicated that patients with dementia had higher PCC scores when their caregivers received PCC education, the increased scores could indicate that PCC dementia education intervention was effective. In addition, I analyzed the type and number of health conditions identified in 2018 as a diagnosis for PAHs and used this as data to develop educational guidelines for caregivers to reduce PAHs for dementia patients. The diagnoses retrieved from the discharge summaries and the number of hospitalizations were documented as potential PAHs. Because of time constraints, I was not able to determine if the PCC educational intervention made a difference with the number of PAHs from May 2018 to April 2019.

Measurement Tools and Instrument

I gave caregivers the P-CAT and QUALID tools to ascertain their perceptions of their dementia patients' QOL and their level of PCC before and after the educational intervention. The scores on these instruments served as a platform to raise awareness of the caregivers on the importance of providing PCC for cognitively impaired patients to improve their QOL.

After reviewing the electronic medical records for patients with dementia from May 2018 to April 2019, I identified those hospital admissions for health conditions that could have been treated effectively in the outpatient setting were classified as PAHs. However, if the patient had to be hospitalized despite being treated in the outpatient setting, this interaction was acknowledged as timely or delayed medical care. In other words, these hospitalizations were not documented as PAHs. I then compared the number of hospital visits classified as PAHs to those visits classified as timely care management in an outpatient setting.

Data Collection

Data collection procedures for this project occurred in five steps. The steps and process of the data collections were as follows:

- Identified caregivers' beliefs about their residents' QOL and their level of PCC by administering the QUALID and P-CAT instruments on the first and third weeks of the study to both the control and intervention groups
- Provided education to caregivers in the intervention group on acute and chronic conditions that may lead to PAHs for residents with impaired cognition using Kitwood's 12 principles of person-centered concepts and Knowles's adult learning theory principles
- Classified acute health conditions such as pneumonia, UTIs, and dehydration as causes for PAHs (Huang et al., 2016)
- Classified chronic conditions such as diabetes, cardiovascular disease, and respiratory conditions as causes for PAHs (Huang et al., 2016)
- Administered the P-CAT and QUALID instruments to caregivers in the intervention group to help them report residents' PCC and QOL scores 2 weeks after the intervention. Caregivers who had received usual training and caregivers who received the intervention were given the P-CAT and QUALID to report their perceptions to determine if the PCC dementia care intervention made a difference in caregivers' level of PCC and their patients' QOL before and after the intervention.

I then reviewed and documented PCC and QUALID scores before and after the educational intervention. I utilized the electronic medical records to view hospital admissions and discharge summaries for dementia patients from May 2018 to April 2019. The number of PAHs helped to highlight the need for implementation of educational interventions in the ALFs included in this project. The caregivers who received PCC dementia education should have been able to identify and report signs and symptoms of worsening health conditions for patients with dementia. In addition, the caregivers who received PCC dementia educational training should have been able to report behavioral and physical changes in the conditions of patients with dementia in a timelier manner than those caregivers who did not receive the PCC dementia educational training. Caregivers in the intervention group were trained on their work site using Kitwood's PCC concepts, which emphasize the importance of providing individualized care based on the patient's needs and preferences. More than half of the patients in the three ALFs in this study received health care services from an advanced practice nurse who visited these facilities quarterly or more frequently based on the needs of the residents. Approximately 90% of the residents in these facilities had been diagnosed with dementia caused by Alzheimer's disease. The other 10% of the residents had not been tested for dementia.

Methods

The DNP educator gave the caregivers who received PCC education training the coursework developed with Kitwood's PCC concepts utilizing Knowles's adult learning theory principles. Caregivers who did not receive the PCC dementia educational training received the usual training given to caregivers who work in ALFs using the DHMH service plan. In addition, caregivers in the control group all worked in only one of the three ALFs to reduce the risk of exposure to caregivers who had received the PCC education. The caregivers from both groups received the P-CAT and QUALID tool to report their beliefs about the QOL of residents and their level of PCC both before and after the intervention.

The caregivers were recruited with the help of the DNP educator, who obtained their consent after sharing the purpose of the study. The DNP educator informed the caregivers that they were being asked to complete two forms or questionnaires that would help to determine their level of PCC and their patients' QOL. Responses were tabulated and scores were determined and compared. The DNP educator identified common chronic conditions of dementia patients and led discussions with caregivers in the intervention group. Using step-by-step instructions, they extensively discussed the plan of care to identify and report changes in the health conditions of dementia patients based on their needs. The service plans served as a guide to focus on health conditions.

Feasibility and Appropriateness

Researchers have studied the use of PCC concepts to educate care staff in residential care homes for seniors. However, only a few researchers have implemented and tested PCC education in ALFs. This project was conducted in three ALFs in southern Maryland. Caregivers who worked in the ALF licensed for 12 residents formed the control group, and I coded them as ALF-C. Caregivers who worked at the other two ALFs, licensed for five residents each, received the PCC training, and I coded the facilities as either ALF-A and ALF- B. Because the three ALFs used the same policy and procedure manual, there were no anticipated problems. The organization and health conditions for dementia patients were similar in each location. Prior to the project, the DNP educator recruited caregivers and explained the purpose of the project. All caregivers were then asked to complete the P-CAT and QUALID questionnaires.

The DNP educator and I reassured caregivers that their participation was voluntary and they could decide at any time to cease their participation. I also reassured caregivers that their identity would not be revealed to protect their privacy. PCC training took approximately three hours, which included time for questions and answers. The caregivers and their supervisors received the training between 1 p.m. and 4 p.m., which was the least busy time during the workday. During the training, the caregivers, the supervisors, and the DNP educator discussed common diagnoses for patients with dementia and identified health conditions that could result in PAHs.

Caregivers in the intervention group discussed the service plans using Kitwood’s PCC concepts. In addition, the DNP educator used Knowles’s andragogy adult learning theory to educate caregivers on early identification of signs and symptoms of worsening health conditions for patients with dementia to improve timely care management and reduce PAHs. All caregivers completed the P-CAT and QUALID questionnaires before and after the educational intervention.

IRB Approval and Process

I received approval from Abilene Christian University’s Institutional Review Board (IRB) after completion of two required trainings before the initiation of the DNP project and after submission of IRB permission forms. I told caregivers throughout the project that their participation was voluntary and they could cease their participation at any time. I told them that their participation was not a job requirement, that they had no obligation to participate in the project, and that their identity would not be revealed. I obtained written consent from each caregiver. I used a coding system to maintain their anonymity and confidentiality.

I did not collect any patient identities. I did document the sex and age of the dementia patients who were hospitalized unnecessarily the year prior to the intervention. There was no need to obtain medical information from the current residents’ medical records because the data for health conditions for the prior year were utilized to develop the PCC educational guidelines to educate caregivers who received the intervention.

Because I am the owner and investigator of the three ALFs involved in the study, an independent DNP educator provided the PCC education. In addition, the DNP educator was responsible for administering the P-CAT and QUALID questionnaires to the caregivers to prevent bias. Caregivers chose a number from a closed bag to identify them as a participant in the study, which became their identifier on their P-CAT and QUALID questionnaires. Caregivers in the intervention and the control groups were instructed to complete the P-CAT and QUALID questionnaires and place them in a sealed box labeled *preintervention*. Two weeks after the PCC training, caregivers completed the PCC and QUALID questionnaires and placed them in another sealed boxed labeled *post-intervention*. The results of the study were calculated and compiled by an independent statistician.

After reviewing the medical records to identify the health conditions that were documented on discharge summaries after hospitalization the year prior to the project, I coded the residents as Resident 1 through Resident 5 in ALF-A, ALF-B, or ALF-C, to protect their privacy. The list of participants and identifying numbers were placed into a locked box by the DNP educator to preserve anonymity and prevent bias. I was given access to residents' medical records using a laptop with a password given by the facility.

Project Site

The project occurred in the same time frame at the three ALF locations in Maryland. The closest hospital is approximately a 10- to 15-minute drive from each location. The three ALFs follow the same procedure and policy manuals. Residents' records are stored electronically and are password-protected. At the time of the study, 90% of the residents in these homes had been diagnosed with dementia caused by Alzheimer's. The other 10% had not been tested for dementia. More than half of the patients received health care services from an advanced practice nurse who visited the homes quarterly and as needed. The number of residents living in these ALFs varied from 10 to 18. The number of caregivers varied from 10 to 12 based on the needs of the facility.

Risks

Caregivers and residents faced no risk of harm. The residents were given the standard of care recommended by Maryland DHMH. The identities of study participants were protected by coding caregivers and the residents using numerical values. None of the collected data included the caregivers' or residents' personal information or name. The privacy of the residents' information was secured by following the Health Insurance Portability and Accountability Act (HIPAA) of 1996, which protects the sharing of a patient's health information (Wilson, 2006). In addition, HIPAA law protects patient identification or health information from being shared without written permission.

Interprofessional Collaboration

As the principal investigator and owner of the three assisted living homes included in the study, I found it essential to obtain an independent educator to teach the study participants the newly developed PCC education guidelines. A DNP mentor with more than 12 years of experience working as an assisted living manager agreed to educate the study participants. The DNP educator was familiar with the guidelines of the assisted living homes because she owned and operated five assisted living homes in Maryland. The caregivers who agreed to participate in this project had worked 6 months to 10 years as caregivers in these three assisted living homes.

Benefits

The project was intended to be helpful in providing guidelines to limit PAHs and improve health care for ALF residents with impaired cognition. The role of caregivers has been discussed extensively in the literature in relation to improving patient outcomes with education on care management guidelines for patients with impaired cognition. Caregivers should continue to share in the responsibilities of identifying and reporting changes in their residents' conditions. In addition, this study should help administrators in long-term care facilities to identify other solutions for reducing PAH. I hope there will be a reduction in PAHs that will improve the health condition of these patients.

Sample

I included a convenience sample of residents and staff in this study. The size of the sample was small because of the small populations in the three ALFs. The number of staff was based on the number of residents. I asked the supervisor in each facility to identify caregivers who could participate in this study. The DNP educator gave information sheets to potential study participants to help solicit their participation. The population in each ALF varied from five to 18 residents. The number of staff members per each facility varied from two to three. A total of 17 residents were residing and 11 caregivers were working in these facilities during the study.

Participants

Caregivers and the supervisor working in these ALFs were potential participants for this study. I utilized the discharge medical records for the dementia patients in the year prior to identifying health conditions that were documented in the discharge summaries for these patients. I sought consent to participate from each caregiver. The DNP educator conducted training sessions for the caregivers at their respective work sites. If staff turnover or a patient's death caused a decrease in participation, changes would have been documented and the study would continue. The confidentiality of each resident was maintained by using coded identifiers when documenting the study findings.

Cost-Benefit Analysis

The cost of the project was approximately $1,200, which included the cost of staff salaries, fuel for vehicles to and from the sites, and copy paper to provide educational materials. The time for monitoring the project weekly was 10–12 hours, which cost approximately $600 in salary. The patients should benefit from a reduction in PAHs. Caregivers who received the training became better prepared to provide PCC that is evidenced-based for patients with dementia. In addition, they received a certificate for completion of PCC training.

Timeline

The project was approved by the IRB in May 2019. The plan for the project meeting was the third week of May 2019. The plan for the project was completed in the last week of June 2019 after approval from the IRB. I conducted the first meeting during the second week in May 2019. The date for communication of the plan was the third week of May. The IRB approval occurred in the first week of May 2019. PCC training occurred in the second week of June 2019. The project was completed by the third week of July 2019 (see Appendix B).

Summary

Chapter 3 described the method and design that I used to conduct the project. Statistical measures evaluated the outcome of PCC education for caregivers in the intervention group and its impact on their evaluation of their residents' QOL and their own level of PCC. In addition, the P-CAT and QUALID tools were administered to the group that did not receive PCC intervention to determine the caregivers’ beliefs about residents’ QOL and PCC scores. A DNP educator conducted the training and was instrumental in protecting the identity of the study participants. The electronic medical records for all patients who remained in the ALF for 6 months or more were used in this project. I also discussed the process for collecting and analyzing the data for this project.

Chapter 4: Quantitative Study

This chapter addresses the analysis of the data collected for this project. The data included the medical records of residents who were hospitalized from May 2018 to April 2019 and the chronic conditions identified from the discharge summaries that helped develop the PCC educational training. In addition, I report the statistical data that I used to analyze the caregivers' perceptions of their levels of PCC and their patients' QOL based on scores on the P-CAT and QUALID questionnaires pre- and post-PCC education. I also compare the data collected from the caregivers in the intervention group to the data collected from the control group.

Project Analysis

I conducted this PCC educational training project within a 4-week period for caregivers employed in three ALFs located in Maryland. I made some cards labeled Caregiver 1, Caregiver 2, and so on and placed them into a sealed bag for the caregivers to choose from before completing the questionnaires. After each caregiver selected a card from the sealed bag, the DNP educator asked them to reveal the number on their card. The DNP educator then wrote their identifier on a separate sheet and placed it into a locked box. Caregivers were instructed to write the number selected on their questionnaires for the duration of the study. This number represented their identifier for this project. The DNP educator documented the names of the caregivers and their identifiers after they signed consent. This process prevented me from identifying the caregivers responsible for completing the questionnaires. Caregivers completed PCC and QUALID questionnaires after they signed consent for participating in the study. The DNP educator explained to caregivers participating in the project that they would receive the PCC education in the second week of the project. The study participants in the intervention group worked in ALF-A or ALF-B. Caregivers in the control group who worked in ALF-C were informed that they would be given two questionnaires on Week 1 and Week 3 of the project. These caregivers were given the usual care and training that is required by the DHMH for ALFs. Caregivers from ALF-A and ALF-B received PCC education in the second week. In the third week of the project, all caregivers on the study completed for the second time the P-CAT and QUALID questionnaires.

Data Collection

I collected pre- and post-intervention data using the P-CAT questionnaire (Edvardsson et al., 2010) and the QUALID questionnaire (Weiner et al., 2000). I also collected data for the number of hospitalizations for UTIs one year before implementation.

The P-CAT consisted of 13 items on a 5-point Likert scale (1 = *disagree completely*, 2 = *disagree*, 3 = *neither agree nor disagree*, 4 = *agree*, and 5 = *agree completely*) “used to evaluate to what extent staff in residential aged care perceive the care provided as being person-centred” (Edvardsson et al., 2010, p. 103). Edvardsson et al. (2010) developed the P-CAT tool with “three subscales covering the following dimensions of person-centredness: extent of personalizing care” (P-CAT 1–6, P-CAT 11), “amount of organizational support” (P-CAT 7–10 reverse-scored), and degree of “environmental accessibility” (P-CAT 12–13; p. 104). In addition, “items within each of the three subscales can be summed to generate subscale scores, as well as summing the total 13 items to generate a total score between 13 and 65, where higher scores indicate higher person-centredness” (*Notes on Scoring*, n.d., p. 1). Table 1 shows the 13 P-CAT items.

Table 1

P-CAT Items

Item	Description
p1	We often discuss how to give person-centered care.
p2	We have formal team meetings to discuss the residents’ care.
p3	The life history of the residents is formally used in the care plans we use.
p4	The quality of the interaction between staff and residents is more important than getting the tasks done.
p5	We are free to alter work routines based on residents’ preferences.
p6	Residents are offered the opportunity to be involved in individualized everyday activities.
p7	I simply do not have the time to provide person-centered care.
p8	The environment feels chaotic.
p9	We have to get the work done before we can worry about a homelike environment.
p10	This organization prevents me from providing person-centered care.
p11	Assessment of residents’ needs is undertaken on a daily basis.
p12	It is hard for residents in this facility to find their way around.
p13	Residents are able to access outside space as they wish.

Note. The data entitled description in Table 1 is adapted from “Development and Initial Testing of the Person-centered Care Assessment Tool (P-CAT)” by D. Edvardsson, D. Fetherstonhaugh, S. Gibson, and R. Nay, 2010, *International Psychogeriatrics*, *22*, pp.101-108. Copyright (2010) by La Trobe University. Adapted with permission.

The QUALID scale consists of 11 observable behaviors rated by frequency on a 5-point Likert scale (Weiner et al., 2000). A total QUALID score is computed by summing the frequency score of the 11 items. The minimum score (best QOL) is 11 points and the maximum (worst QOL) is 55 points (Weiner et al., 2000). Table 2 shows the 11 QUALID observable behaviors.

Table 2

The 11 QUALID Observable Behaviors

Item	Description
q1	Smiles
q2	Appears physically uncomfortable
q3	Appears sad
q4	Makes statements or sounds (verbalizations suggest discomfort)
q5	Cries
q6	Is irritable or aggressive
q7	Has a facial expression of discomfort
q8	Enjoys eating
q9	Enjoys touching/being touched
q10	Enjoys interacting with others
q11	Appears emotionally calm and comfortable

Note. The data from Table 11 entitled Description are from " The Quality of Life in Late-Stage Dementia (QUALID) Scale," by M. F. Weiner, K. Martin-Cook, D. A. Svetlik, K. Saine, B. Foster, and C. S. Fontaine, 2000, *Journal of the American Medical Directors Association*, *1*, pp. 114-6. Reprinted with permission.

Method of Analysis

Survey data for P-CAT and QUALID were imported into and analyzed using SPSS version 23 for Windows. Frequency tables and descriptive statistics (means and standard deviations) were used to summarize the pre- and post-intervention survey responses for P-CAT and QUALID. For any item with missing responses, a mode was used to replace the missing value. Subscale scores of P-CAT and total scores of P-CAT and QUALID were computed according to the scoring instructions. To determine the effect of PCC dementia education, the following analyses were performed:

- Within the intervention and control groups, I conducted paired *t* tests to determine if there was a statistically significant difference in the subscale scores of the P-CAT and the total scores of the P-CAT and QUALID between Week 1 before the intervention and Week 3 after the intervention.
- Two-sample *t* tests were performed to determine if there was a statistically significant difference in each of the subscale scores of the P-CAT and the total scores of the P-CAT and QUALID between the two groups pre- and posttest.
- After computing the difference between pre- and post-intervention for each of the subscale scores of the P-CAT and the total scores of the P-CAT and QUALID, two-sample *t* tests were performed to determine if there was a statistically significant difference between the intervention group and the control group. For any test, a *p* value of less than 0.5 indicates significance. All *p* values were two-sided.

I summarized into tables the data for the number of hospitalizations for UTIs one year before implementation.

Data From Caregivers Who Received Usual Training

Four caregivers from ALF-C agreed to participate in the study by signing their consent. Caregivers from this facility were classified as the control group. They were given two questionnaires that helped the investigator conduct this project in the first and third weeks. The DNP educator gave the study participants the P-CAT and QUALID questionnaires in the first week of the project. The control group caregivers did not receive any information or education about PCC guidelines. The DNP educator provided them with questionnaires on June 24, 2019. They wrote their identifier code on the questionnaires as instructed by the DNP educator before they were collected.

Data From Caregivers Who Received the PCC Educational Training

Five caregivers from two ALFs initially agreed to become participants receive the PCC educational training. However, only four caregivers signed their consent. The DNP educator prepared *Caregiver 1* through *Caregiver 8* identifiers on separate pieces of paper. The caregivers had the opportunity to choose a number from a closed bag. This number was used as their identifier for pre- and post-intervention.

Analysis Results for P-CAT and QUALID Questionnaires

The total sample size for the study was 8. Four caregivers in the intervention group received the PCC education, and four caregivers in the control group did not receive PCC education. Tables 3 through 6 summarize the survey responses on the P-CAT and QUALID questionnaires for the eight caregivers.

The P-CAT score ranged from 13 to 65, and a higher person-centeredness score indicated that the facility under study provided an environment that supported personalized care based on patient preferences. The P-CAT scores for the intervention group ranged from 39 to 44 pre- and post-intervention. The scores in the control group for Week 1 and Week 3 ranged from 32 to 46. There were missed questions from one caregiver that could have affected the scores for the intervention group (Table 5). Table 7 presents pre- and post-intervention statistics of the subscales of the P-CAT and the total scores of the P-CAT and QUALID for the intervention group.

Table 3

Frequency Counts of P-CAT Survey Responses for the Control Group

Item	Pretest					Posttest				
	1	2	3	4	5	1	2	3	4	5
p1	0	0	0	2	2	0	0	0	2	2
p2	0	0	1	1	2	0	0	1	2	1
p3	0	0	0	0	4	0	1	1	1	1
p4	0	0	0	3	1	0	0	0	2	1
p5	0	2	0	2	0	0	1	1	2	0
p6	0	0	0	1	3	0	0	0	4	0
p7	3	1	0	0	0	3	1	0	0	0
p8	1	1	0	0	1	2	2	0	0	0
p9	1	2	0	0	1	2	1	0	1	0
p10	3	1	0	0	0	2	1	0	0	1
p11	0	0	0	2	2	0	0	0	2	1
p12	1	3	0	0	0	2	1	0	1	0
p13	2	0	1	0	1	1	0	2	1	0

Note. 1 = *disagree completely*, 2 = *disagree*, 3 = *neither agree nor disagree*, 4 = *agree*, and 5 = *agree completely*. One response for p8 of the pretest was missing. One response for p4 and p11 of the posttest was missing.

Table 4

Frequency Counts of QUALID Survey Responses for the Control Group

	Pretest					Posttest				
Item	1	2	3	4	5	1	2	3	4	5
q1	0	0	0	4	0	3	0	0	0	1
q2	0	0	0	4	0	2	1	1	0	0
q3	3	1	0	0	0	3	0	0	4	0
q4	3	0	0	1	0	2	2	0	0	0
q5	0	0	0	4	0	4	0	0	0	0
q6	0	0	0	4	0	2	1	0	1	0
q7	2	1	1	0	0	2	1	1	0	0
q8	4	0	0	0	0	3	0	0	0	0
q9	2	2	0	0	0	2	2	0	0	0
q10	2	2	0	0	0	4	0	0	0	0
q11	2	2	0	0	0	3	0	0	0	0

Note. Frequency ratings were on a 5-point Likert scale (1 to 5), with a higher rating indicating a higher frequency of behaviors for q2–q7 and a lower frequency of behaviors for q1 and q8–q11. One response for q8 and q11 of the posttest was missing.

Table 5

Frequency Counts of P-CAT Survey Responses for the Intervention Groups

	Pretest					Posttest				
Item	1	2	3	4	5	1	2	3	4	5
p1	0	0	1	1	2	0	0	0	2	2
p2	0	0	0	2	1	0	0	0	4	0
p3	0	0	0	2	2	0	0	1	1	2
p4	0	0	0	2	2	1	1	0	1	1
p5	1	1	0	0	1	0	1	1	1	1
p6	0	0	0	1	2	0	0	0	3	1
p7	1	2	0	0	1	2	2	0	0	0
p8	1	2	0	0	0	1	2	0	0	0
p9	1	1	0	1	1	1	2	0	1	0
p10	1	2	0	0	0	1	2	0	1	0
p11	0	0	0	1	3	0	0	0	2	2
p12	1	1	1	1	0	1	2	0	1	0
p13	0	1	2	1	0	0	0	0	3	1

Note. 1 = *disagree completely*, 2 = *disagree*, 3 = *neither agree nor disagree*, 4 = *agree*, and 5 = *agree completely*. One response for p2, p5, p6, p8, and p10 of the pretest was missing. One response for p8 of the posttest was missing.

Table 6

Frequency Counts of QUALID Survey Responses for the Intervention Group

	Pretest					Posttest				
Item	1	2	3	4	5	1	2	3	4	5
q1	4	0	0	0	0	4	0	0	0	0
q2	3	0	0	0	1	1	1	2	0	0
q3	2	1	0	0	1	1	0	1	0	1
q4	1	2	0	0	1	1	0	2	0	0
q5	2	1	1	0	0	2	1	0	1	0
q6	1	0	2	1	0	1	2	1	0	0
q7	3	0	0	0	1	2	1	0	0	1
q8	4	0	0	0	0	2	1	0	1	0
q9	0	1	2	0	1	1	2	0	1	0
q10	2	1	1	0	0	2	1	1	0	0
q11	3	0	0	0	1	2	1	0	1	0

Note. Frequency ratings were on a 5-point Likert scale (1 to 5), with a higher rating indicating a higher frequency of behaviors for q2–q7 and a lower frequency of behaviors for q1 and q8–q11. One response for q3 and q4 of the posttest was missing.

Table 7

Descriptive Statistics of the P-CAT Subscales and the Total Scores of the P-CAT and QUALID for the Intervention Group

	Caregivers Without PCC Education			Caregivers With PCC Education		
	Pretest	Posttest	Diff. (post–pre)	Pretest	Posttest	Diff (post–pre)
P-CAT extent of personalizing care	30.25 (2.98)	27.75 (2.99)	–2.50 (1.73)	29.50 (1.29)	28.00 (4.00)	–1.50 (5.07)
P-CAT amount of organizational support	16.50 (3.42)	17.00 (3.83)	0.50 (1.00)	15.00 (3.74)	16.25 (3.30)	1.25 (6.02)
P-CAT degree of environmental accessibility	4.25 (2.22)	4.75 (2.06)	0.50 (1.73)	5.50 (1.91)	6.50 (1.00)	1.00 (2.00)
P-CAT total	51.00 (4.24)	49.50 (4.12)	–1.50 (0.58)	50.00 (3.56)	50.75 (6.29)	0.75 (8.81)
QUALID	14.25 (3.86)	16.25 (2.22)	2.00 (4.24)	22.25 (7.50)	22.00 (5.29)	–0.25 (10.37)

Within-Group Differences

I conducted paired *t* tests to determine if there was a statistically significant difference within the intervention and control groups in the subscale scores of the P-CAT and the total scores of the P-CAT and QUALID before and after the education session. The mean preintervention P-CAT total score (*M* = 51.00, *SD* = 4.24) was statistically significantly higher than the mean post-intervention P-CAT total score (*M* = 49.50, *SD* = 4.12; Table 7). For caregivers in the control group (Table 8), there was no statistically significant difference between pre- and post-intervention scores in these categories: P-CAT extent of personalizing care (*t*(3) = 2.887, *p* = .063); P-CAT amount of organizational support (*t*(3) = –1.000, *p* = .391); P-CAT degree of environmental accessibility (*t*(3) = –0.577, *p* = .604); and QUALID (*t*(3) = –0.943, *p* = .415). However, there was no statistically significant difference between pre- and post-intervention P-CAT total scores (*t*(3) = 5.196, *p* = .014).

Table 8

Results of Paired t *Tests for the Control Group*

	Paired differences							
				95% CI of the difference				
	Diff.	*SD*	*SE*	Lower	Upper	*t*	*df*	*p*
P-CAT extent of personalizing care	2.50	1.73	0.87	–0.26	5.26	2.887	3	.063
P-CAT amount of organizational support	–0.50	1.00	0.50	–2.09	1.09	–1.000	3	.391
P-CAT degree of environmental accessibility	–0.50	1.73	0.87	–3.26	2.26	–0.577	3	.604
P-CAT total	1.50	0.58	0.29	0.58	2.42	5.196	3	.014
QUALID	–2.00	4.24	2.12	–8.75	4.75	–0.943	3	.415

Note. Diff. = mean difference between pretest and posttest; *SD* = standard deviation; *SE* = standard error; CI = confidence interval; lower = lower bound; upper = upper bound; *t* = *t* statistic; *df* = degrees of freedom; *p* = *p* value.

For caregivers in the intervention group who received PCC education (Table 9), there was no statistically significant difference between pre- and post-intervention scores in these categories: P-CAT extent of personalizing care (*t*(3) = 0.592, *p* = .595); P-CAT amount of organizational support (*t*(3) = –0.415, *p* = .706); P-CAT degree of environmental accessibility (*t*(3) = –1.000, *p* = .391); total P-CAT scores (*t*(3) = –0.170, *p* = .876), and QUALID (*t*(3) = 0.048, *p* = .965).

Table 9

Results of Paired t *Tests for the Intervention Group*

	Paired differences							
				95% CI of the difference				
	Diff.	*SD*	*SE*	Lower	Upper	*t*	*df*	*p*
P-CAT extent of personalizing care	1.50	5.07	2.53	–6.56	9.56	0.592	3	.595
P-CAT amount of organizational support	–1.25	6.02	3.01	–10.83	8.33	–0.415	3	.706
P-CAT degree of environmental accessibility	–1.00	2.00	1.00	–4.18	2.18	–1.000	3	.391
P-CAT total	–0.75	8.81	4.40	–14.77	13.27	–0.170	3	.876
QUALID	0.25	10.37	5.19	–16.25	16.75	0.048	3	.965

Note. Diff. = mean difference between pretest and posttest; *SD* = standard deviation; *SE* = standard error; CI = confidence interval; lower = lower bound; upper = upper bound; *t* = *t* statistic; *df* = degrees of freedom; *p* = *p* value.

Between-Group Differences

Two-sample *t* tests were performed to determine if there was a statistically significant difference in each of the subscale scores of the P-CAT pre- and post-intervention and the total scores of the P-CAT and QUALID pre- and post-intervention for the intervention and control groups. The results are presented in Table 10.

Table 10

Results of Two-Sample t *Tests in Each of the P-CAT Subscale Scores and the Total Scores of the P-CAT and QUALID*

	Two-sample *t* tests for equality of means						
	Diff.	*SE*	95% CI of the difference		*t*	*df*	*p*
Test			Lower	Upper			
Pre							
P-CAT extent of personalizing care	0.75	1.63	–3.23	4.73	0.461	6	.661
P-CAT amount of organizational support	1.50	2.53	–4.70	7.70	0.592	6	.575
P-CAT degree of environmental accessibility	–1.25	1.46	–4.83	2.33	-0.853	6	.426
P-CAT total	1.00	2.77	–5.78	7.78	0.361	6	.730
QUALID	8.00	4.22	–18.32	2.32	–1.897	6	.107
Post							
P-CAT extent of personalizing care	–0.25	2.50	–6.34	5.86	–0.100	6	.923
P-CAT amount of organizational support	0.75	2.53	–5.44	6.94	0.297	6	.777
P-CAT degree of environmental accessibility	–1.75	1.15	–4.55	1.05	–1.528	6	.177
P-CAT total	–1.25	3.76	–10.45	7.95	–0.332	6	.751
QUALID	–5.75	2.87	–12.77	1.27	–2.004	6	.092

Note. Diff. = mean difference between the two groups; *SE* = standard error; CI = confidence interval; lower = lower bound; upper = upper bound; *t* = *t* statistic; *df* = degrees of freedom; *p* = *p* value.

The results of the preintervention questionnaires showed that there was no statistically significant difference between the control group and intervention group in their recognition and application of PCC for their dementia patients. The results were as follows: P-CAT extent of personalizing care ($t(6) = 0.461$, $p = .661$); P-CAT amount of organizational support ($t(6) = 0.592$, $p = .575$); P-CAT degree of environmental accessibility ($t(6) = –0.853$, $p = .426$); total P-CAT scores ($t(6) = 0.361$, $p = .730$); and QUALID ($t(6) = –1.897$, $p = .107$).

The results of the post-intervention questionnaires indicated that there was no statistically significant difference between the caregivers in the intervention group and in the control group in their P-CAT questionnaire results (Table 11). The results were as follows: P-CAT extent of personalizing care ($t(6) = –0.100$, $p = .923$); P-CAT amount of organizational support ($t(6) = 0.297$, $p = .777$); P-CAT degree of environmental accessibility ($t(6) = –1.528$, $p = .177$); total P-CAT scores ($t(6) = -0.332$, $p = .751$); and QUALID ($t(6) = –2.004$, $p = .092$).

Difference in Change Scores

After computing the difference between pre- and post-intervention for each of the subscale scores of the P-CAT and the total scores of P-CAT and QUALID, two-sample t tests were performed to determine if there was a statistically significant difference on these questionnaires between the intervention and control groups. The analysis results are presented in Table 11. There was no statistically significant difference between the intervention and control groups on their pre- and post-intervention P-CAT and QUALID scores. These were the results in the following categories: P-CAT extent of personalizing care ($t(6) = –0.374$, $p = .722$); P-CAT organizational support ($t(6) = –0.246$, $p = .814$); P-CAT degree of environmental accessibility (*t*(6) = –0.378, *p* = .718); total P-CAT scores (*t*(6) = 0.510, *p* = .628); and QUALID (*t*(6) = 0.402, *p* = .702).

Table 11

Results of Two-Sample t Tests Between the Intervention and Control Groups Pre- and Post-intervention

Test	Two-sample *t* tests for equality of means						
			95% CI of the Difference				
	Diff.	*SE*	Lower	Upper	*t*	*df*	*p*
P-CAT extent of personalizing care	–1.00	2.68	–7.55	5.55	–0.374	6	.722
P-CAT amount of organizational support	–0.75	3.05	–8.22	6.72	–0.246	6	.814
P-CAT degree of environmental accessibility	–0.50	1.32	–3.74	2.74	–0.378	6	.718
P-CAT total	–2.25	4.41	–13.05	8.55	0.510	6	.628
QUALID	2.25	5.60	–11.46	15.96	0.402	6	.702

Note. Diff. = mean difference between the two groups; *SE* = standard error; CI = confidence interval; lower = lower bound; upper = upper bound; *t* = *t* statistic; *df* = degrees of freedom; *p* = *p* value.

Data Collected for Hospitalized Patients With Dementia

The development of the PCC educational training was dependent on the diagnosis and number of hospitalizations that occurred within a year in the ALFs included in the project. There were five residents who were hospitalized from the three ALFs. UTIs were listed as a diagnosis in all of the residents' discharge summaries. The five residents spent approximately three days in the hospital for the treatment of UTIs. The ages of the patients ranged from 68 to 94 years. There was a pattern of PAHs for four of the patients who were hospitalized more than two times from

May 2018 to April 2019. Resident 1 was a 94-year-old woman who was hospitalized for UTI after she was observed with poor appetite, extreme weakness, and vomiting and was sent to the hospital via emergency medical services (EMS). Resident 2, a 76-year-old man, was hospitalized for UTI after he was observed with confusion. Resident 3 had been hospitalized on four occasions for UTI after he was observed with foul-smelling urine, sleeping throughout the day, lethargy and weakness, and elevated blood sugar. Resident 4, a 68-year-old woman, was hospitalized for UTI after she was noted with poor appetite, extreme lethargy, and vomiting. Resident 5, an 82-year-old woman, was hospitalized for UTI when she was noted with multiple falls, aggressive behavior, and foul-smelling urine. Four of the patients were diagnosed with dementia caused by Alzheimer’s disease. Resident 2 had a diagnosis of unspecified dementia.

Table 12 shows the data for the number of hospitalizations due to UTI for five residents (three females and two males) between May 2018 to April 2019, one year prior to the PCC education intervention. The residents were hospitalized once (Residents 2 and 4) to four times (Resident 3). The hospital stays were from two to five days.

Table 12

Number of Hospitalizations for UTI From May 2018 to April 2019

Resident	Admit month	Discharge diagnosis	Age	Census for facilities	Hospitalized days	Gender
#1	June 2018	UTI/dehydration	94	15	3	Female
#1	October 2018	UTI/sepsis/hyperkalemia	94	16	3	Female
#1	December 2018	UTI/vomiting	94	17	2	Female
#2	August 2018	UTI/sepsis/confusion	69	17	5	Male
#3	September 2018	UTI/chronic renal disease—stage 4	81	16	2	Male
#3	November 2018	UTI/hyperglycemia	82	16	2	Male
#3	January 2019	UTI	82	16	2	Male
#3	March 2019	UTI	82	17	2	Male
#4	November 2018	UTI	68	16	2	Female
#5	December 2018	UTI/ uncontrolled hypertension	82	17	3	Female
#5	February 2019	UTI	82	17	2	Female

Strength of PCC Educational Intervention Project

The caregivers who received the PCC intervention could relate to the importance of providing care that is timely to prevent PAHs. Participants for the study were able to communicate effectively with the DNP educator about their personal experiences working with residents with impaired cognition. Caregivers were given an opportunity to report the best way to intervene when a patient with dementia shows signs or symptoms of a health condition that may lead to PAHs. Caregivers reported that the PCC educational guidelines were easy to follow and understand. Although the study participants were mostly new employees, they were able to give their perspectives on person-centeredness and QOL for their cognitively impaired residents as indicated by scores on the P-CAT and QUALID questionnaires.

Weaknesses of the PCC Educational Intervention Project

I was not able to generalize the findings because the sample size was too small. In addition, the results would be more generalizable if participants were a more diverse group that included both new and older employees. The majority of caregivers in the control group (ALF-C) had been employed for more than six months. However, most caregivers in the intervention group, from ALF-A and ALF-B, had been employed for less than six months. The lack of experience with working in the ALFs could have affected the caregivers’ responses on their questionnaires about their perception of their level of PCC and the residents’ QOL. In other words, caregivers with less working experience may not have sufficient experience and knowledge to answer the questions on the P-CAT and QUALID questionnaires appropriately. In addition, some of the vocabulary and terminology on the questionnaires may have been difficult for some of the caregivers to comprehend. The results of the questionnaires for both the groups showed responses that did not coincide with their responses on similar items. For example, the term *alter* on the P-CAT questionnaire for Question 5 (“We are free to alter work routines based on residents’ preferences”) generated responses that were not aligned with the other responses on the questionnaire (see Appendix E). Responses on the questionnaires that did not align well with other responses by the same caregiver were seen in both groups.

Recommendations for Future Studies

Researchers may need to review the questionnaires with the caregivers prior to completing them to ensure that the responses are reflective of their perceptions. Caregivers may need to have the terms or vocabulary explained for each question before the questionnaire is administered. The point is that a review should occur and questions should be fielded by the researcher before administering the questionnaires.

Limitations of the Scope of the Project

Initially, I had planned to include the PCC and QOL measures and the number of hospitalizations for the residents with impaired cognition pre- and post-intervention. However, because of a lack of time for conducting the original project, which was to identify the number of PAHs after PCC education training, the focus of the project changed to identifying the caregivers’ perceptions of PCC and QOL scores before and after the PCC education. The control group was also evaluated on their perception of PCC and QOL scores in the first and third weeks of the project with the usual dementia training and educational DHMH guidelines provided by the ALF.

Although I developed the PCC educational materials, I had to relinquish the task of finding study participants and conducting the training because of a conflict of interest. I own the

ALFs used in the project. That is the reason I involved the DNP educator to fulfill these roles. The small sample size was expected because these ALFs were relatively small and employed only enough caregivers based on the number of residents living at each location.

Conclusion

This chapter summarized the work of the project, from obtaining informed consent from the caregivers in the first week to completing the PCC and QUALID questionnaires in both the control and intervention groups in the fourth week. The discussion revealed that the easy-to-follow PCC educational guidelines increased caregivers' understanding of PCC concepts. The caregivers' reading comprehension levels may have affected the responses to some of the items on the questionnaires, which may have altered the results. The analysis showed that there was no real difference between the intervention and control groups in PCC and QOL measures for the pre- and posttests. The implication for future projects would be to ensure that caregivers have the opportunity to verbalize their understanding of the questionnaires prior to scoring the pre- and posttests.

Chapter 5: Data Interpretation

In this chapter, I discuss the results of PCC educational training and provide an interpretation of the findings. The project results helped me identify if PCC education made a difference in caregivers’ perceptions of PCC and their patients’ QOL before and after the intervention. For caregivers who received the usual training, the results helped to determine if other factors need to be investigated that could have influenced their QOL and PCC scores. Most importantly, the results helped determine if caregivers in the control group changed their beliefs and perceptions of QOL and person-centeredness from the first to the third weeks of the study. I reviewed the data collected from this study to determine the effects of PCC education as revealed by PCC and QOL scores given by caregivers versus the scores given by caregivers who did not receive the PCC education.

Interpretation of the Findings for Both P-CAT and QUALID Questionnaires

Although there were no statistically significant differences between the two groups that completed the pre- and post-intervention P-CAT questionnaires, the results indicated that both groups perceived that the ALF where they worked provided an environment that encouraged person-centeredness for dementia patients. For example, Question 6 on the P-CAT asked if the residents were given the opportunity to participate in their care. The caregivers’ responses ranged from *agree* to *strongly agree* for both groups. Caregiver 6 did not respond to this item. However, after the intervention, this caregiver indicated agreement with the statement (see Table 1). The results for both groups on the QUALID questionnaires indicated that they perceived their work environment as positive for improving the QOL for residents with impaired cognition, as evidenced by the lower scores for QOL. The scores in both groups ranged from 12 to 30.

QUALID scores range from 11 to 55; lower scores indicate a higher QOL. Possibly indicating the effect of PCC education, Caregiver 1 in the intervention group tallied a score of 30 before PCC education and 20 after. In contrast, the scores of Caregiver 6 hardly changed from 25 preintervention to 24 post-intervention. The majority of the control group participants gave lower scores that ranged between 12 and 17 both times they completed the QUALID, which indicated that they perceived their work environment as a positive environment for improving the QOL of cognitively impaired residents.

Inferences About the Findings

The results of this project revealed that caregivers' perceptions of QOL and the person-centeredness of patients with impaired cognition did not show any marked improvement as a result of PCC education. The scores that were given by caregivers in the control and intervention groups reflected that the caregivers in these ALFs already had high levels of PCC and perceived high QOL indicators for residents with dementia. The study results were similar to those of a 6-month study to tabulate PCC scores for staff who were trained with PCC in palliative care and given the P-CAT tool before and after the intervention to assess the benefit of PCC training (Bökberg, Behm, Wallerstedt, & Ahlström, 2019). The study had both an intervention group (*n* = 167) and a control group (*n* = 198). The staff that participated in both groups scored high before the intervention with no improvement in PCC scores after intervention. The researchers concluded that there was less need to implement improvement strategies based on the staff's high level of PCC palliative care before the intervention.

Implications of Analysis for Leaders

The analysis of the data shows that the scores given by some of the caregivers were not consistent with some of their answers. In addition, the high scores may indicate that the caregivers did not fully understand the questions or that they viewed their assisted living homes to be supportive of the needs of patients with impaired cognition. The caregivers in both groups gave scores that showed that they perceived their work environment to be supportive of PCC and to provide good QOL for the residents. Nursing leaders should reward care staff who provide consistent care based on the needs and preferences of cognitively impaired residents. These residents will spend less time in the hospital if their primary care providers manage their health conditions appropriately and in a timely manner.

Implications for analysis of this project for leaders would be to include more caregiver participants from a larger ALF to conduct similar studies in the future. I did not recruit enough study participants (n = 8) in this project to conclude that PCC education for the caregiver would influence the care provided to residents with dementia. In addition, leaders may need to develop tools that would measure PCC education for caregivers that leads to a reduction of PAHs.

This project may encourage leaders to develop policies and procedures that will better guide caregivers to proactively identify and report changes in the condition of patients. The goals for the new policies would be to reduce worsening health conditions and PAHs for patients who cannot verbalize their health concerns. In addition, health care leaders should conduct further studies to identify practices and caregiver training that improve the health of patients with impaired cognition in ALFs.

EBP Findings and Relationship to DNP Essentials (I-VIII)

DNP Essential I: Scientific Underpinnings for Practice was accomplished with the development and implementation of PCC education for caregivers of residents with impaired cognition (American Association of Colleges of Nursing [AACN], 2006). The project results indicated no significant relationship between the PCC and QOL life scores before and after PCC education. The project utilized theoretical concepts from psychology to develop and implement PCC education. Other research studies have helped formulate care guidelines that could be used to improve patient outcomes in long-term care settings.

DNP Essential II: Organizational and Systems Leadership for Quality Improvement was accomplished with the development and implementation of PCC education for caregivers in ALFs in Maryland (AACN, 2006). PCC education for caregivers in long-term care settings was conducted based on the problem with PAHs for residents with impaired cognition. The results were analyzed and are shared to further other research projects. The control and intervention groups' responses on the P-CAT and QUALID tools helped to determine if there was a need for further studies on care management guidelines for dementia patients.

DNP Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice is clearly important for improving the health status of patients with impaired cognition in residential care homes (AACN, 2006). The educational materials I provided can be amended and utilized in ALFs to educate caregivers on common health conditions that may cause PAHs for residents with Alzheimer's disease. A review of other studies provided evidence-based guidelines that were used to develop the care guidelines for PCC education.

DNP Essential IV: Information Systems/Technology for the Improvement and Transformation of Health Care was accomplished by using the electronic medical records to identify diagnoses for patients who were hospitalized at any time in the year prior to the project (AACN, 2006). The patient information was retrieved from their electronic medical records utilizing iCare Manager (ICM) software. I retrieved the hospital discharge summaries for patients with impaired cognition from electronic medical records from May 2018 to April 2019 and used them to develop policies and procedures. In addition, the information retrieved from health care organizations and online journals provided evidence-based studies to guide PCC education. Information technology is an essential part of the current health care industry; DNP leaders should obtain the knowledge and training to utilize technology for the improvement of their patients' health.

DNP Essential V: Health Care Policy for Advocacy in Health was relevant for the completion of this DNP project (AACN, 2006). This project has emphasized the costs associated with PAHs for patients with impaired cognition due to Alzheimer's. Thus, administrators in residential care homes should join forces with health care leaders to implement policies that address the reduction of PAHs for these patients. This project provided evidence-based practice guidelines that should improve the timely management of health conditions for patients with Alzheimer's. Moreover, this project has helped enhance awareness among caregivers of the voices of the frail and elderly who suffer from poor memory or impaired judgment due to Alzheimer's. Policies and procedures were developed and taught to caregivers to improve the timely management of changes in behavior and physical condition of residents with dementia to prevent PAHs. Because of time constraints, the PCC education was not evaluated to identify if there was a significant relationship between PCC education and PAHs for patients with impaired cognition.

DNP Essential VI: Inter-Professional Collaboration for Improving Patient and Population Health Outcomes was manifested in the PCC education that I developed and implemented for caregivers working in ALFs (AACN, 2006). This project helped me communicate more effectively with other health care providers to improve patient outcomes. The need for care management guidelines will be shared with other ALF leaders in an effort to improve patient outcomes. As a DNP graduate, it is imperative that my time is invested in sharing and seeking the best solutions to improve the treatment of patients with dementia.

DNP Essential VII: Clinical Prevention and Population Health for Improving the Nation's Health have been applied to the development of PCC education (AACN, 2006). For example, the factors that affected PCC education were identified and discussed prior to the development of PCC education for caregivers. The stigma associated with patients who have impaired cognition was identified as a barrier that prevented access and timely management of health conditions. The risk associated with PAH was identified. Policies and procedures were developed to reduce PAHs for patients with impaired cognition. Because there is no cure for Alzheimer's disease, care management guidelines are essential for improving health outcomes for this population.

DNP Essential VIII: Advanced Nursing Practice is an important learning for the DNP graduate to acquire. Advanced nursing practice shows that the DNP graduate is prepared to provide care based on the needs of patients. In addition, the DNP graduate is trained to identify the best treatment protocols for complicated health issues, collaborating with other health care professionals and providing guidance to other nursing professionals (AACN, 2006). Disseminating the findings of this project will provide the opportunity as an advanced practice nurse with a DNP degree to share the project findings and recommendations for future research to improve patient outcomes for patients with Alzheimer’s.

Recommendations for Future Research and Clinical Practice

This project has helped me to focus on conducting a study that helped me identify the factors that may be related to PAHs and poor medical management of UTIs for patients with dementia. UTIs were shown to be the most prevalent health condition that caused PAHs for residents with dementia living in the three ALFs that participated in the project. In addition, there should be more studies done on care management guidelines in residential care homes and the relationship to PAHs for patients with impaired cognition over a period of 6 months to 1 year.

Conclusion

The study results indicated that caregivers in the three ALFs seemed to show high levels of person-centeredness and QOL scores for both groups in the first week of the study. There was no need for extra PCC education because caregivers perceived that they had already been providing personalized care based on the needs of the residents. The study results indicated that the PCC educational training did not influence the caregivers’ perceptions of their PCC or their estimations of the QOL of residents under their care. It would be more effective to conduct this kind of study in an ALF with staff who lack knowledge about the importance of providing care that is meaningful and person-centered. Certainly, such ALF staffs exist. The dementia care training that both groups received before they begin working in the assisted living homes may have included the importance of personalized care for the patients in ALFs without focusing specifically on PCC for patients with impaired cognition caused by Alzheimer’s. Thus, none of the caregivers who participated in this study thought it was unusual for patients to be given the opportunity to make individualized choices based on their needs.

References

Alzheimer’s Association. (n.d.). *Reducing potentially avoidable hospitalizations for people living with Alzheimer’s and other dementias*. Retrieved from https://www.alz.org /publichealth/downloads/policy-brief-preventable.pdf

American Association of Colleges of Nursing. 2006. *DNP essentials*. Retrieved from https://www.aacnnursing.org/DNP/DNP-Essentials

Batsch, M. S., & Mittelman, N. L. (2012). *Overcoming the stigma of dementia*. Retrieved from http://www.julianhowell.co.uk

Bernardes, C., Massano, J., & Freitas, A. (2018). Hospital admissions 2000–2014: A retrospective analysis of 288 096 events in patients with dementia. *Archives of Gerontology and Geriatrics*, *77*, 150–157. doi:10.1016/j.archger.2018.05.006

Bökberg, C., Behm, L., Wallerstedt, B., & Ahlström, G. (2019). Evaluation of person-centeredness in nursing homes after a palliative care intervention: pre- and post-test experimental design [Abstract]. *BMC Palliative Care*, *18*(1), 44. doi:10.1186/s12904-019-0431-8

Bowling, A., Rowe, G., Adams, S., Sands, P., Sasi, K., Crane, M., . . . Manthorpe, J. (2015). Quality of life in dementia: A systematically conducted narrative review of dementia-specific measurement scales. *Aging & Mental Health*, *19*(1), 13–31. doi:10.1080 /13607863.2014.915923

Camp, C. J., Bourgeois, M. S., & Erkes, J. (2018). Person-centered care as treatment for dementia. In *APA handbook of dementia* (pp. 615–629). Washington, DC: American Psychological Association. doi:10.1037/0000076-033

Chenoweth, L., Forbes, I., Fleming, R., King, M. T., Stein-Parbury, J., Luscombe, G., . . . Brodaty, H. (2014). PerCEN: A cluster randomized controlled trial of person-centered residential care and environment for people with dementia. *International Psychogeriatrics*, 26(7), 1147–1160. doi:10.1017/S1041610214000398

Edvardsson, D., Fetherstonhaugh, D., Nay, R., & Gibson, S. (2010). Development and initial testing of the Person-Centered Care Assessment Tool (P-CAT). *International Psychogeriatrics*, *22*(1), 101. doi:10.1017/S1041610209990688

Edvardsson, D., & Innes, A. (2010). Measuring person-centered care: a critical comparative review of published tools. *The Gerontologist*, *50*(6), 834–846. doi:10.1093/geront/gnq047

Herbert, L. E., Weuve, J., Scherr, P. A., & Evans, D. A. (2013). Alzheimer disease in the United States (2010–2050) estimated using the 2010 census. *Neurology*, *80*(19), 1778–1783. doi:10.1212/WNL.0b013e31828726f5

Hobday, J. V, Savik, K., Smith, S., & Gaugler, J. E. (2010). Feasibility of Internet training for care staff of residents with dementia: The CARES program. *Journal of Gerontological Nursing*, *36*(4), 13–21. doi:10.3928/00989134-20100302-01

Huang, K.-L., Chih Jin, S., Harari, O., Kapoor, M., Bertelsen, S., Czajkowski, J., . . . Neumann, P. J. (2016). National estimates of potentially avoidable hospitalizations among Medicare beneficiaries with Alzheimer's disease and related dementia. *Alzheimer's & Dementia*, *12*(7), 253–254. doi:1016/j.jalz.2016.06.454

Husaini, B., Gudlavalleti, A. S., Cain, V., Levine, R., & Moonis, M. (2015). Risk factors and hospitalization costs of dementia patients: examining race and gender variations. *Indian Journal of Community Medicine*, *40*(4), 258–263. doi:10.4103/0970-0218.164396

Kaisey, M., Mittman, B., Pearson, M., Connor, K. I., Chodosh, J., Vassar, S. D., … Vickrey, B. G. (2012). Predictors of acceptance of offered care management intervention services in a quality improvement trial for dementia. *International Journal of Geriatric Psychiatry*, *27*(10), 1078–1085. doi:10.1002/gps.2830

Kim, S. K., & Park, M. (2017). Effectiveness of person-centered care on people with dementia: A systematic review and meta-analysis. *Clinical Interventions in Aging*, *12*, 381–397. doi:10.2147/CIA.S117637

Kitwood, T. (1997). *Dementia reconsidered: The person comes first*. New York, NY: Open University Press.

Knapp, M., Chua, K.-C., Broadbent, M., Chang, C.-K., Fernandez, J.-L., Milea, D., … Hayes, R. D. (2016). Predictors of care home and hospital admissions and their costs for older people with Alzheimer's disease: Findings from a large London case register. *BMJ Open, 6*(11), e013591. doi:10.1136/bmjopen-2016-013591

Knowles, M. S., Holton, E. F., & Swanson, R. A. (2015). *The adult learner* (8th ed.). New York, NY: Routledge.

Kogan, A. C., Wilber, K., & Mosqueda, L. (2016). Person-centered care for older adults with chronic conditions and functional impairment: A systematic literature review. *Journal of the American Geriatrics Society*, *64*(1), e1–e7. doi:10.1111/jgs.13873

Li, J., & Porock, D. (2014). Resident outcomes of person-centered care in long-term care: A narrative review of interventional research. *International Journal of Nursing Studies*, *51*(10), 1395–1415. doi:10.1016/j.ijnurstu.2014.04.003

Lin, P.-J., Fillit, H. M., Cohen, J. T., & Neumann, P. J. (2013). Potentially avoidable hospitalizations among Medicare beneficiaries with Alzheimer's disease and related disorders. *Alzheimer's & Dementia*, *9*(1), 30–38. doi:10.1016/j.jalz.2012.11.002

Lin, P.-J., Zhong, Y., Fillit, H. M., Cohen, J. T., & Neumann, P. J. (2017). Hospitalizations for ambulatory care sensitive conditions and unplanned readmissions among Medicare beneficiaries with Alzheimer's disease. *Alzheimer's & Dementia*, *13*(10), 1174–1178. doi:10.1016/J.JALZ.2017.08.010

Matthews, K. A., Xu, W., Gaglioti, A. H., Holt, J. B., Croft, J. B., Mack, D., & McGuire, L. C. (2019). Racial and ethnic estimates of Alzheimer's disease and related dementias in the United States (2015–2060) in adults aged ≥ 65 years. *Alzheimer's & Dementia*, *15*(1), 17–24. doi:10.1016/j.jalz.2018.06.3063

Mitchell, G., & Agnelli, J. (2015). Person-centred care for people with dementia: Kitwood reconsidered. *Nursing Standard*, *30*(7), 46–50. doi:10.7748/ns.30.7.46.s47

Moyle, W., Venturato, L., Cooke, M., Murfield, J., Griffiths, S., Hughes, J., & Wolf, N. (2016). Evaluating the capabilities model of dementia care: A non-randomized controlled trial exploring resident quality of life and care staff attitudes and experiences. *International Psychogeriatrics*, *28*(7), 1091–1100. doi:10.1017/S1041610216000296

Nelson, L., & Tablet, N. (2015). Slowing the progression of Alzheimer's disease: What works? *Ageing Research Reviews*, *23*(Pt. B), 193–209. doi:10.1016/j.arr.2015.07.002

Notes on scoring on the Person-Centred Care Assessment Tool (P-CAT). (n.d.). Retrieved from http://arrow.latrobe.edu.au:8080/vital/access//manager/Repository/latrobe:37344

Segal, M., Rollins, E., Hodges, K., & Roozeboom, M. (2014). Medicare–Medicaid eligible beneficiaries and potentially avoidable hospitalizations. *Medicare & Medicaid Research Review*, *4*(1), E1–E10. doi:10.5600/mmrr.004.01.b01

Sivananthan, S. N., Lavergne, M. R., & McGrail, K. M. (2015). Caring for dementia: A population-based study examining variations in guideline-consistent medical care. *Alzheimer's & Dementia*, *11*(8), 906–916. doi:10.1016/j.jalz.2015.02.008

Sjogren, K., Lindkvist, M., Sandman, P., Zingmark, K., & Edvardsson, D. (2012). Person-centredness and its association with resident well-being in dementia care units. *Journal of Advanced Nursing*, 69(10), 2196–2205. doi:10.1111/jan.12085

Stephan, A., Bieber, A., Hopper, L., Joyce, R., Irving, K., Zanetti, O., . . . Meyer, G. (2018). Barriers and facilitators to the access to and use of formal dementia care: Findings of a focus group study with people with dementia, informal careers and health and social care professionals in eight European countries. *BMC Geriatrics*, *18*(1), 1–16. doi:10.1186/s12877-018-0816-1sd

Terada, S., Oshima, E., Yokota, O., Ikeda, C., Nagao, S., Takeda, N., … Uchitomi, Y. (2013). Person-centered care and QOL of patients with dementia in long-term care facilities. *Psychiatry Research*, *205*(1–2), 103–108. doi:10.1016/j.psychres.2012.08.028

Thies, W., & Bleiler, L. (2013). Alzheimer's disease fact sheet. *Alzheimer's & Disease*, *9*(2), 208–245. doi:10.1016/j.jalz.2013.02.003

Weiner, M. F., Martin-Cook, K., Svetlik, D. A., Saine, K., Foster, B., & Fontaine, C. S. (2000). The Quality of Life in Late-Stage Dementia (QUALID) scale. *Journal of the American Medical Directors Association*, *1*(3), 114–116. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/12818023Ret

Wilson, J. F. (2006). Health Insurance Portability and Accountability Act Privacy rule causes ongoing concerns among clinicians and researchers. *Annals of Internal Medicine*, *145*(4), 313–316. doi:10.7326/0003-4819-145-4-200608150-00019

Zhong, X. B., & Lou, V. W. Q. (2013). Person-centered care in Chinese residential care facilities: A preliminary measure. *Aging & Mental Health*, *17*(8), 952–958. doi:10.1080/13607863.2013.790925

Zhu, C. W., Cosentino, S., Ornstein, K., Gu, Y., Andrews, H., & Stern, Y. (2014). Use and cost of hospitalization in dementia: Longitudinal results from a community-based study. *International Journal of Geriatric Psychiatry*, *30*(8), 833–841. doi:10.1002/gps.4222

Appendix A: PCC Educational Training

Person-Centered Care Education for Caregivers in Assisted Living Homes
Goals and Purpose for Learning about Person-Centered Care

1. To identify the best approaches to managing the care for patients with dementia
2. To understand the rationale for identifying and reporting changes in behavior and physical condition of patients with dementia
3. To increase treatment of health conditions for patients with dementia by their primary care providers
4. To reduce the risk of PAHs for patients with dementia

There are many conditions that may cause PAHs for patients with dementia. Studies have shown that UTIs (UTIs), pneumonia, uncontrolled hypertension (HTN) or diabetes mellitus (DM) increased the risk of hospitalizations for patients with dementia. Unfortunately, patient with dementia has short term memory loss which makes it difficult for them to verbalize their needs leading to delayed medical care and worsening health conditions.

What can you do differently?

Caregivers spend more time with the residents. Thus, they are more likely to see changes in the residents under their care that may signal that something is wrong, and they need medical intervention sooner rather than later.

There are some steps that should be taken that will help to prevent unnecessary hospitalizations

You must treat the patients with dementia equally by allowing them to verbalize their concerns. If a patient is showing any changes in behavior, they should be given the opportunity to verbalize their needs. The caregiver may notice subtle changes. It is crucial for the caregiver to report any changes from the norm for patients with dementia.

DO NOT GET INTO THE HABIT OF CLASSIFYING ALL BEHAVIORS NEW OR OLD AS DEMENTIA BEING THE CAUSE. IN OTHER WORDS, AVOID TELLING YOUR CO-WORKERS OR SUPERVISOR THAT RESIDENT WITH DEMENTIA BEHAVIOR IS RELATED TO THE ILLNESS OF ALZHEIMER’S OR DEMENTIA. IT IS IMPORTANT TO IDENTIFY OTHER HEALTH CONDITIONS OR ISSUES THAT MAY BE CAUSING THE CHANGE IN BEHAVIOR OT PHYSICAL CONDITION.

Tom Kitwood, a pioneer of dementia care wrote that the personhood of the person with dementia should be respected. People with dementia should not be treated as if they are not human. He spoke about some harmful behavior termed “malignant social psychology” that he believed were harmful to patients with dementia. He summarized the main psychological needs for the patient with dementia as comfort, attachment or close bonds, inclusion-feeling a part of a group, occupation-involve with activities, and identity-create a sense of belonging. The following behaviors should be avoided while providing care in the assisted living home:

Using False statements to trick the patient into doing a task (for example, telling them that they are returning home when they are in no condition to return home).
Taking away their ability to complete a task that they could do with verbal or physical cues to remind them (For example, if they could feed themselves, allow them to do so with verbal cues or holding their hands to guide them. Avoid taking away their self-worth.
Do not threaten or intimidate them into completing a task.
Do not make them feel less of a person by telling them that they have dementia and when their behavior does not fit in the normal pattern.
Removing the patient from interacting with others or ignoring them because they may appear different
Mocking or laughing at a person's behavior
Speaking with negative and mean comments to stop a behavior that is unacceptable.
When you grasp the concepts that a person with dementia should be treated with respect and dignity the caregiver will see that their roles will include identifying when there are changes from their normal behavior that needs to be reported in a timely mane to the right person to improve their health outcomes.
I will discuss some of the important factors Tom Kitwood wrote about the role of the caregivers with interacting positively with patients with dementia that may reduce the risk of PAH.

Role of the caregiver according to Tom Kitwood to enhance the personhood of patient's with dementia includes the following:
Acknowledgement or recognition: This occurs when the caregiver does not judge the behavior of patients with dementia. In other words, they will try to understand what changes are going on with the resident with dementia before concluding that the behavior is a result of dementia. If the caregiver checks the patient's vital signs, listen to the patient and meet their individual need the patient health condition may be treated by their primary care doctor instead of the emergency room/hospitalization.

Negotiate: The caregiver should speak directly to the patient with dementia about a possible concern they are attempting to share. The caregiver will ask the patient to clarify concerns and try to come up with a good solution after speaking with the ALM or nurse. In other words, the caregiver does not ignore the patient's attempts to communicate their needs. If the patient is refusing to participate with or accepting assistance with their care, try to negotiate a time that is suitable for the patient. Avoid forcing the patient to comply by yelling or telling them that they don't have a choice.

Changes in Behavior or Physical Conditions

Policy

Caregivers should report all changes in their resident's behavior or health check blood pressure, pulse and temperature immediately to their nurse or ALM. The caregiver is required to seek help from the nurse or ALM when they encounter any changes in patients with behavior or health condition. A note should be written to document the instructions given by the nurse or ALM in the health record. The caregiver should document if the behavior worsened or improved and the plan of action.

Procedure

Check urine odor or color.
Check bowel movements.
Document findings and recommendations from the nurse or ALM.
Report and document any improvements or worsening of behavior or health conditions immediately.
Document the plan of action including when to follow up and who to report if no improvement.

Suspect UTI if the following occurs:

Unwitnessed or witnessed fall (s)
Changes in the mental or physical condition
New episodes of confusion, delirium, aggressive behavior, uncontrolled diabetes (blood sugars greater than the norm for this patient), hypertension, low pulse

Policy

Patients with dementia with changes in urine odor or color should have their urine collected for testing. The caregiver must notify the nurse/ALM for instructions on when and how to collect and store the urine before analysis.

The residents with dementia urine should be checked for odor or changes in color daily. Report all changes to the nurse/ALM. All residents with witnessed or unwitnessed falls urine should be check for changes in odor or color. All changes in mental status causing confusion should be checked for UTI immediately. Residents with dementia with confusion, delusional, new-onset aggressive behavior, uncontrolled diabetes, uncontrolled hypertension, and low pulse rate urine must be collected for testing.

Procedure

Check urine color or odor daily and report and document changes and plan of action.
If urine changes are noted check blood pressure, pulse, and temperature and report all changes to nurse/ALM.
Monitor for changes in behavior or physical condition for a resident with dementia.
Report urine that has a strong or foul-smelling immediately.
Report discolored urine and frequent urination.

Suspect Respiratory Infections such as pneumonia if the following occurs:

Coughing with chest congestion (Crackles or wheezing sounds coming from the chest)
Fever
Weakness and lethargy

Policy

Notify ALM/Nurse immediately if there are any changes with the breathing, wheezing, chest congestion or rattling noises from the lungs or coughing.

Procedure

Ensure patient is in an upright position.
Avoid feeding if they are actively coughing.
Report and document all changes to the ALM/nurse immediately.
Administer inhalers or nebulizers as needed if is ordered
Document recommendations and improvements or worsening health conditions with a plan of action.

Utilizing Concepts from the Knowles Adult Learning Theory
(This section is for the DNP Educator)

1. The caregivers need to understand the rationale for this PCC education training
2. The caregiver must be an active participant with sharing their experiences and plan of care
3. The caregiver's prior knowledge about PCC should be explored to determine their willingness to learn
4. Discuss the certificate for completion of this training as a tool to motivate the caregiver to learn

Ask the student to share the experience with taking care of a patient with dementia with changes in behavior.
How was the patient treated who had changes in their behavior or physical condition?
Where did the patient receive treatment and for what health problems?
What should they have done differently as a caregiver?

Suspect Dehydration if the following occurs:

Urinating small amounts of urine
Urine odor is strong or acidic.
Lips are dry and cracked.
Lethargy or weakness
New-onset confusion

Policy

Residents should receive 6-8 oz of fluids 5- 6 x daily. If the resident refused fluids the nurse/ALM should be notified immediately.

Procedure

Offer water plus juice for breakfast, lunch, dinner and snacks after breakfast, before dinner and at bedtime.
Provide juices, ice-tea or lemonade to increase fluid intake. Ask the resident for their preferences to increase compliance with fluid intake. Person-centered care education recommends that the resident be included with making choices.

Suspect Bowel impaction or constipation

No BM in 24 hours or health care provider.
No recent bowel movement in 2- 3 days.
Bowel movements are hard or small amounts.
Vomiting before or after meals
Difficulty with pushing out stool from the rectum.

Policy

Every resident should have a normal size bowel movement every 2-3 days. Notify ALM/Nurse if the resident has no BM. Notify ALM/nurse if bowel movements are hard.

Procedure

Offer as needed medications for constipation.
If as needed medications are ineffective report size or no BMs to nurse/ALM.
Assist the resident with sitting on the toilet or potty chair to have a bowel movement.
Turn the patient on their side while lying in bed if the patient is bedridden.
If the stool is lodged in buttocks notify nurse/ALM.
Offer warm prune juice and plenty of water.
Notify ALM/ nurse if the patient is unable to have a good bowel movement.

Caregivers Procedure for Person-Centered Care for Patients with Dementia

Timely management (Ask Student what time management means)

Ask the students to describe how they would intervene if they suspect that their patient with dementia has a health problem that will not improve without medical treatment. Utilizing Knowles's adult learning theory, the student will be encouraged to use their experience to identify changes in their patient's health condition.

Notify the nurse or assisted living manager for all Changes

Increase fluids by mouth (6-8 oz of water for breakfast, 11 am snacks, lunch, and 2;30 pm snacks and dinner for strong urine odors.
Notify health care provider if the resident becomes aggressive or delusional for no apparent reason. Delusional means the resident is talking about people or places that do not make any sense or does not exist.
Ask your nurse or ALM permission to Collect a urine specimen within 2 days if urine odor does not improve.
Follow up with the nurse on the urine results.

Hypertension or High Blood Pressure

Policy

All residents with HTN should have their blood pressure checked daily, weekly, or monthly as ordered.

Procedure

Person-centered care guidelines recommend that you ask the patient which arm you should use to check their blood pressure. This gives them the opportunity to make choices or decisions about their care.

If the patient with dementia refuse blo0d pressure checks do not use trickery. Tell them that you can return at another time. Ask the resident what time would be best to return for checking their blood pressure. Try to negotiate to provide care if the patient perceives that you may cause harm.

Always ask permission before providing care. It is crucial for the patient with dementia to perceive that they are being treated with respect. Yes, the patients with dementia understand when they are treated with love and respect and they will respond accordingly most of the time.

Use a manual or automatic blood pressure machine to check your resident's blood pressure.

Use a blood pressure cuff that does not fit too tightly.

Check every resident's blood pressure with HTN daily or as recommended by their nurse or health care provider.

Identify the name and dose of the medication that is used to treat HTN and administer as ordered

Follow protocols that tell you when to give or hold blood pressure medications

Notify your nurse or ALM immediately if the blood pressure is above or below the expected ranges. Hold or administer blood pressure medications as ordered.

If you contact the delegating nurse document the instructions given by the nurse and repeat the blood pressure in 1 hour. If the blood pressure is extremely high > 20 mm/Hg above expected blood pressure repeat in 15 to 30 minutes after administering blood pressure medications. For example, a normal reading may be 120/70 if the expected value to notify the nurse or health care provider is >170/100 or <100 /60 the caregiver should notify the designated person for blood pressure readings in those parameters.

If the patient becomes unresponsive and 911 is called ask the nurse/ALM to give a report to the hospital and request a urine specimen to be checked for UTI when they arrive at the emergency room.

The nurse or ALM must verify that a urine sample was collected before the patient is returned to your facility

Diabetes

Policy

Check blood sugars for every resident who is receiving medication for diabetes as ordered.

You must know the normal ranges and expected ranges for your residents.

You must have the telephone numbers for the Nurse/ALM/ or health care provider for your resident.

You must document the instructions of the nurse/ALM/ or health care provider.

Procedure

Identify the expected ranges for a blood sugar reading for your patients.

Check blood sugars as ordered before meals.
Report all reading that is <60 >200 mg/dl immediately to your nurse/ALM.
Notify health care provider/nurse or ALM if blood sugars are greater than 300's.
Give orange juice with sugar if blood sugar is below 60 and the patient is showing signs of hypoglycemia.
If the patient is unresponsive place sugar on the tongue and call 911. Continue to check blood sugars every minute until the number is above 70 mg/dl.
If blood sugar readings continue to be high despite any changes in diet or activity report all changes to the ALM/Nurse. Monitor urine odor and color. Collect urine specimen for testing as soon as possible after getting permission from the nurse.
If the patient is sent to the hospital due to elevated or low blood sugars, ask the nurse or ALM to check if urine was collected and request a urine test before discharge or ask the nurse /ALM to request a urine sample if the hospital did not check for UTI.

Congestive Heart Failure

Policy

Check weight daily or weekly as indicated. Report and document all weight gain of 5 or more pounds to the ALM/nurse. You must check the weigh tat the same location and upon rising to maintain accuracy. All changes in weight of more than 2 lbs. should be reported and documented.

Procedure

Use the same scale at the same location upon rising for the patient.
Report all episodes of chest congestion, swelling of upper and lower extremities immediately to ALM/nurse immediately.
Call the emergency service if the patient develops shortness of breath, wheezing or chest pain.
Administer fluid daily pills as ordered daily or as needed.

Understanding Common Health Conditions That May Lead to Unnecessary Hospitalizations

UTI (UTI): This occurs when bacteria enter the urinary tract and may affect the kidney, bladder, urethra (which takes the urine to the outside). Many illnesses may make it easier for patients to get UTI's. Some of the symptoms of UTI may be loss of appetite, weakness, confusion, or tiredness.
Hypertension (HTN): The pressure that builds up against the walls of the blood vessels can be high or low when the blood pressure is measured. The high reading could be harmful to the patient leading to stroke, heart and kidney failure, and blindness. Please report any complaints of blindness, chest pain, confusion, headaches, nausea and vomiting, nose bleeds and shortness of breath
Diabetes Mellitus (DM): DM or high blood sugars occurs when the body has difficulty with changing foods to make energy(glucose) that is necessary to live an active life. A person may get diabetes if they cannot make enough insulin or if they become obese and inactive. There are type

1, Insulin-dependent, that is usually diagnosed before adulthood and Type 2, non-insulin dependent, that is usually diagnosed in adulthood, caused by obesity.

Please observe the resident for increased thirst, frequent urination, tiredness, confusion, poorly healing wounds, and sudden weight loss.

Congestive Heart Failure (CHF): This occurs when the heart becomes weak and it is unable to pump the blood needed for the body. The result of the inability of the heart to pump properly causes the fluid to build up throughout the body. The patient with CHF may appear extremely weak and lethargic, increase coughing, shortness of breath, weight gain, difficulty breathing when laying down in a flat position, swelling of the feet and ankles and frequent urinating throughout the night.

Pneumonia: This occurs when bacteria or viruses enter the small air sacs or alveoli of the lungs leading to coughing that is dry or productive, fever, difficulty breathing, and chest pain. This condition may be seen with patients who have difficulty swallowing (aspiration pneumonia) and the food or fluids go to the lungs instead of the stomach. Report any episodes of coughing, shortness of breath and fever.

Appendix B: DNP Project Timeline

September 2018	Meet with chair to discuss QUALID and P-CAT tools
October–December 2018	Received permission to use QUALID Wrote and revised DNP proposal
January–February 2019	Prepared for proposal presentation
March 2019	Proposal presentation
April 2019	Discussed PCC education with DNP educator
May 2019	IRB submission Discussed recruitment process and PCC education with DNP educator
June–July 2019	Developed PCC dementia education guidelines Submitted PCC education guidelines to DNP educator Recruited participants Administered P-CAT and QUALID questionnaires Implementation of PCC guidelines Data collection
August–September 2019	Consulted with chair on final DNP proposal defense
October 2019	Press release
November–December 2019	Developed manuscript for publishing

PCC education training refers to person-centered care concepts, policies, and procedures for caregivers to improve timely identification and reporting of worsening health conditions leading to PAHs for patients with impaired cognition.

PCC education development involved obtaining the diagnoses from discharged records of patients with Alzheimer’s who were hospitalized for conditions that could have been treated effectively by their primary care provider.

Appendix C: Copy of PCC Educational Training Certificate

Certificate of Completion

is hereby granted to

Caregiver 1

Has successfully completed:

3 Hours
Person-Centered Care Education for Caregivers in Assisted Living Home

Granted: 06/24/2019

Claudia Warren-Taylor, DNP, FNP-BC

Appendix D: IRB Approval Letter

ABILENE CHRISTIAN UNIVERSITY
Educating Students for Christian Service and Leadership Throughout the World

Office of Research and Sponsored Programs
320 Hardin Administration Building, ACU Box 29103, Abilene, Texas 79699-9103
325-674-2885

Dear Dawn,

On behalf of the Institutional Review Board, I am pleased to inform you that your project titled

(IRB# 19-061)is exempt from review under Federal Policy for the Protection of Human Subjects.

If at any time the details of this project change, please resubmit to the IRB so the committee can determine whether or not the exempt status is still applicable.

I wish you well with your work.

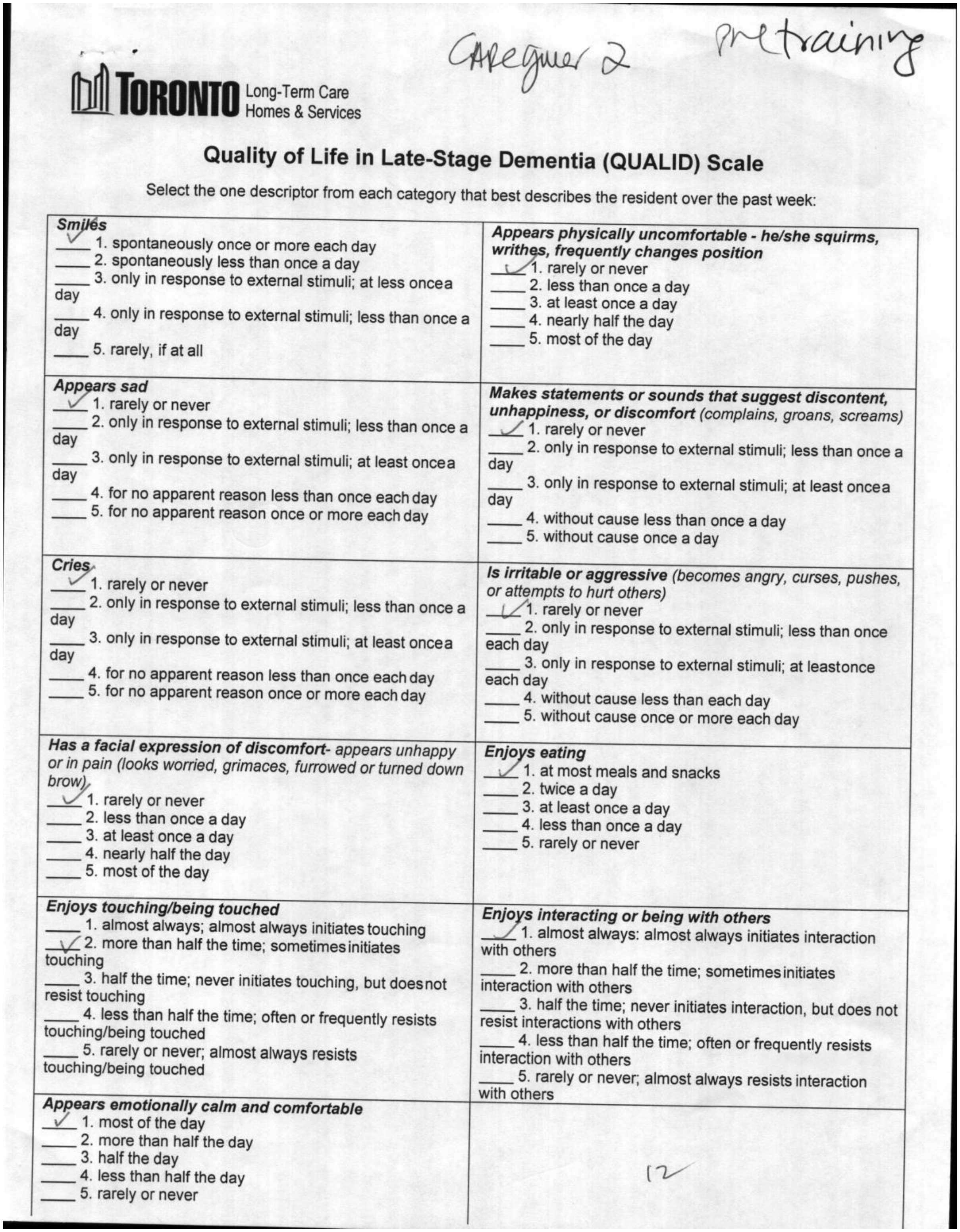
Sincerely,

Megan Roth

Megan Roth, Ph.D.
Director of Research and Sponsored Programs

Our Promise: ACU is a vibrant, innovative, Christ-centered community that engages students in authentic spiritual and intellectual growth, equipping them to make a real difference in the world.

Appendix E: Sample of Caregiver 2 Pre- and Post-intervention Questionnaires



Caregiver 2 pretraining

TORONTO Long-Term Care Homes & Services

Quality of Life in Late-Stage Dementia (QUALID) Scale

Select the one descriptor from each category that best describes the resident over the past week:

Smiles
✓ 1. spontaneously once or more each day
____ 2. spontaneously less than once a day
____ 3. only in response to external stimuli; at less once a day
____ 4. only in response to external stimuli; less than once a day
____ 5. rarely, if at all

Appears physically uncomfortable - he/she squirms, writhes, frequently changes position
✓ 1. rarely or never
____ 2. less than once a day
____ 3. at least once a day
____ 4. nearly half the day
____ 5. most of the day

Appears sad
✓ 1. rarely or never
____ 2. only in response to external stimuli; less than once a day
____ 3. only in response to external stimuli; at least once a day
____ 4. for no apparent reason less than once each day
____ 5. for no apparent reason once or more each day

Makes statements or sounds that suggest discontent, unhappiness, or discomfort *(complains, groans, screams)*
✓ 1. rarely or never
____ 2. only in response to external stimuli; less than once a day
____ 3. only in response to external stimuli; at least once a day
____ 4. without cause less than once a day
____ 5. without cause once a day

Cries
✓ 1. rarely or never
____ 2. only in response to external stimuli; less than once a day
____ 3. only in response to external stimuli; at least once a day
____ 4. for no apparent reason less than once each day
____ 5. for no apparent reason once or more each day

Is irritable or aggressive *(becomes angry, curses, pushes, or attempts to hurt others)*
✓ 1. rarely or never
____ 2. only in response to external stimuli; less than once each day
____ 3. only in response to external stimuli; at leastonce each day
____ 4. without cause less than each day
____ 5. without cause once or more each day

Has a facial expression of discomfort*- appears unhappy or in pain (looks worried, grimaces, furrowed or turned down brow)*
✓ 1. rarely or never
____ 2. less than once a day
____ 3. at least once a day
____ 4. nearly half the day
____ 5. most of the day

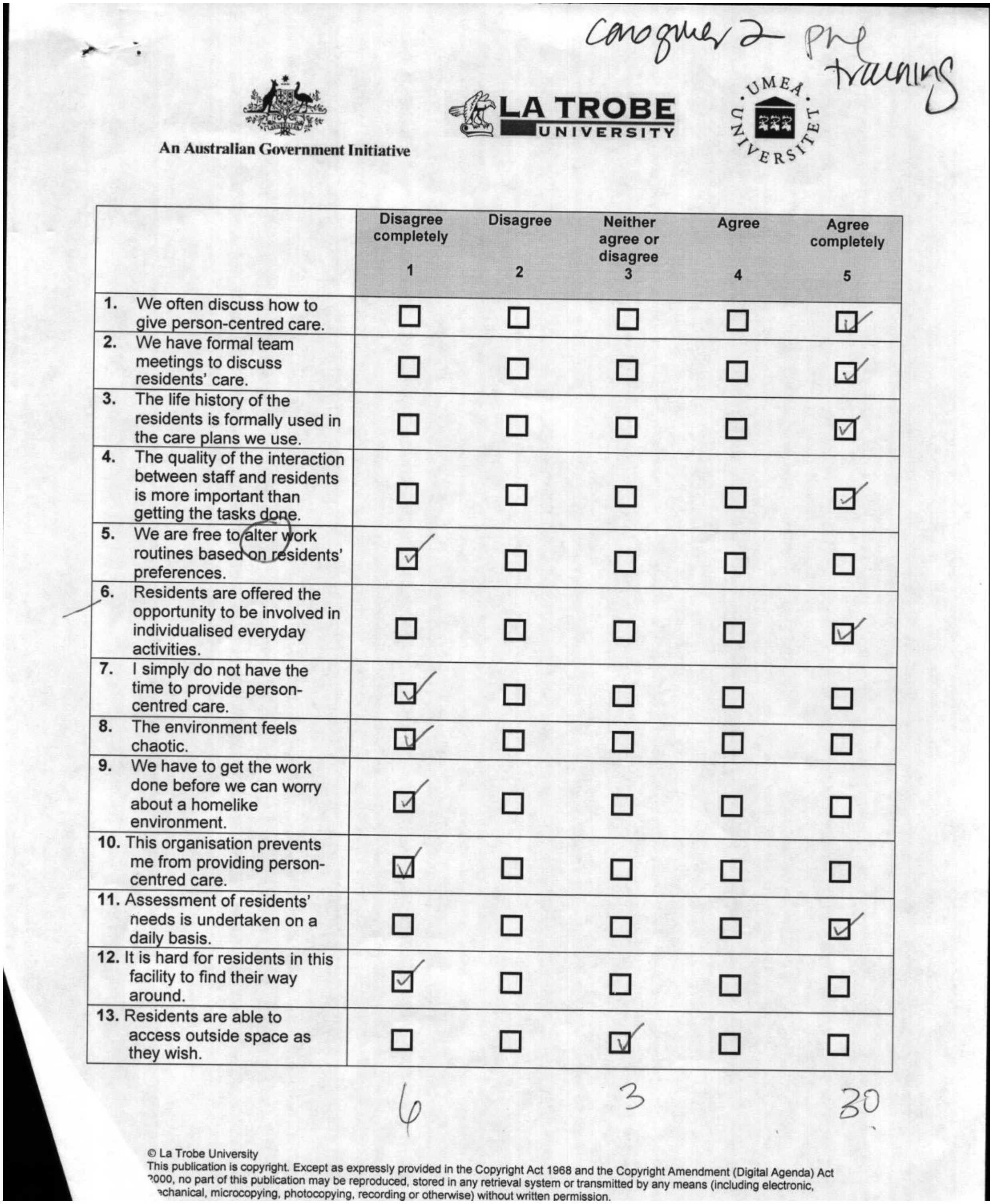
Enjoys eating
✓ 1. at most meals and snacks
____ 2. twice a day
____ 3. at least once a day
____ 4. less than once a day
____ 5. rarely or never

Enjoys touching/being touched
____ 1. almost always; almost always initiates touching
✓ 2. more than half the time; sometimes initiates touching
____ 3. half the time; never initiates touching, but does not resist touching
____ 4. less than half the time; often or frequently resists touching/being touched
____ 5. rarely or never; almost always resists touching/being touched

Enjoys interacting or being with others
✓ 1. almost always: almost always initiates interaction with others
____ 2. more than half the time; sometimes initiates interaction with others
____ 3. half the time; never initiates interaction, but does not resist interactions with others
____ 4. less than half the time; often or frequently resists interaction with others
____ 5. rarely or never; almost always resists interaction with others

Appears emotionally calm and comfortable
✓ 1. most of the day
____ 2. more than half the day
____ 3. half the day
____ 4. less than half the day
____ 5. rarely or never

12



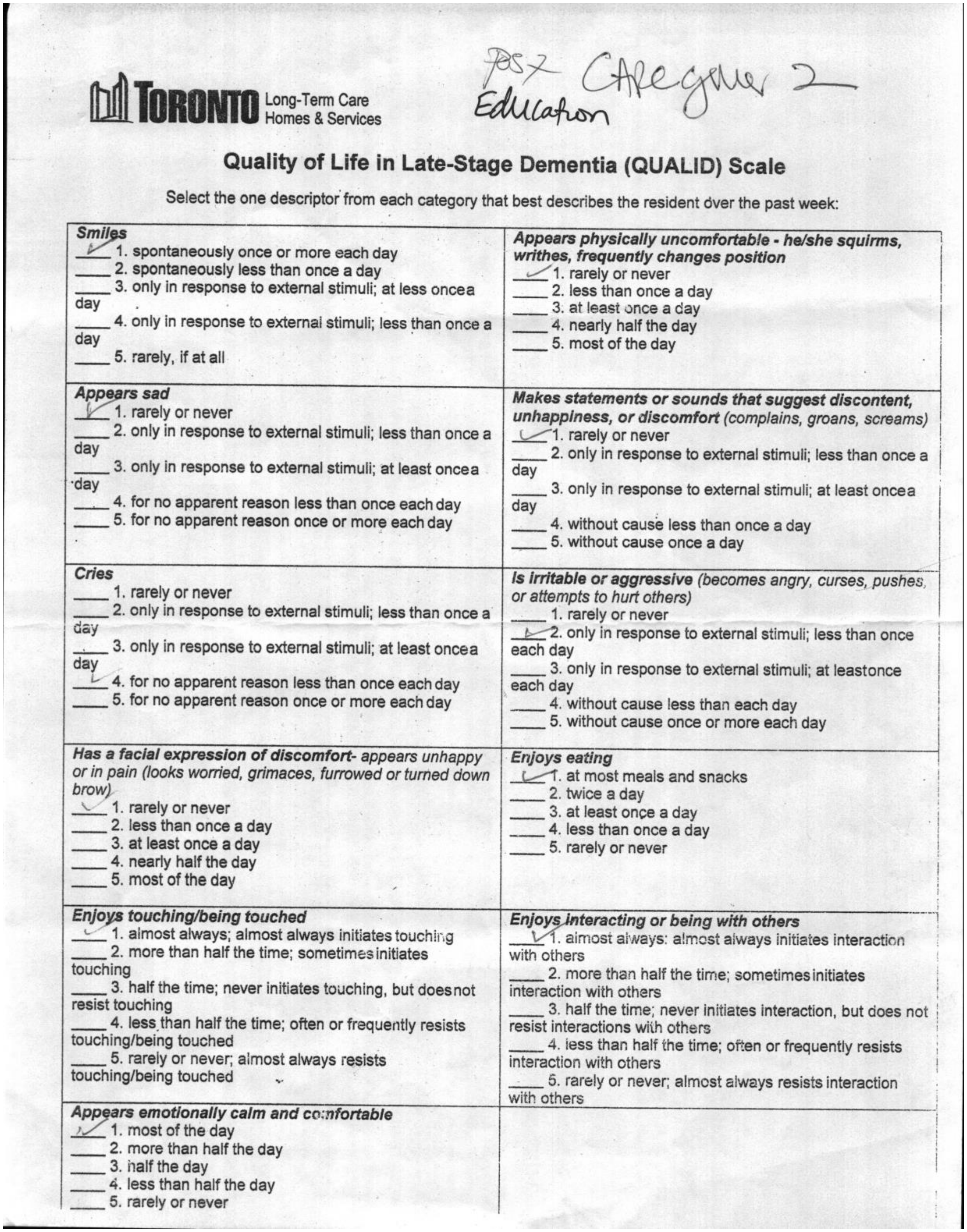
caregiver 2 – pre training

An Australian Government Initiative

LA TROBE UNIVERSITY

UMEÅ UNIVERSITET

	Disagree completely 1	Disagree 2	Neither agree or disagree 3	Agree 4	Agree completely 5
1. We often discuss how to give person-centred care.	☐	☐	☐	☐	☑
2. We have formal team meetings to discuss residents' care.	☐	☐	☐	☐	☑
3. The life history of the residents is formally used in the care plans we use.	☐	☐	☐	☐	☑
4. The quality of the interaction between staff and residents is more important than getting the tasks done.	☐	☐	☐	☐	☑
5. We are free to alter work routines based on residents' preferences.	☑	☐	☐	☐	☐
6. Residents are offered the opportunity to be involved in individualised everyday activities.	☐	☐	☐	☐	☑
7. I simply do not have the time to provide person-centred care.	☑	☐	☐	☐	☐
8. The environment feels chaotic.	☑	☐	☐	☐	☐
9. We have to get the work done before we can worry about a homelike environment.	☑	☐	☐	☐	☐
10. This organisation prevents me from providing person-centred care.	☑	☐	☐	☐	☐
11. Assessment of residents' needs is undertaken on a daily basis.	☐	☐	☐	☐	☑
12. It is hard for residents in this facility to find their way around.	☑	☐	☐	☐	☐
13. Residents are able to access outside space as they wish.	☐	☐	☑	☐	☐
	6		3		30



Post Caregiver 2
Education

TORONTO Long-Term Care
Homes & Services

Quality of Life in Late-Stage Dementia (QUALID) Scale

Select the one descriptor from each category that best describes the resident over the past week:

Smiles
✓ 1. spontaneously once or more each day
____ 2. spontaneously less than once a day
____ 3. only in response to external stimuli; at less once a day
____ 4. only in response to external stimuli; less than once a day
____ 5. rarely, if at all

Appears physically uncomfortable - he/she squirms, writhes, frequently changes position
✓ 1. rarely or never
____ 2. less than once a day
____ 3. at least once a day
____ 4. nearly half the day
____ 5. most of the day

Appears sad
✓ 1. rarely or never
____ 2. only in response to external stimuli; less than once a day
____ 3. only in response to external stimuli; at least once a day
____ 4. for no apparent reason less than once each day
____ 5. for no apparent reason once or more each day

Makes statements or sounds that suggest discontent, unhappiness, or discomfort *(complains, groans, screams)*
✓ 1. rarely or never
____ 2. only in response to external stimuli; less than once a day
____ 3. only in response to external stimuli; at least once a day
____ 4. without cause less than once a day
____ 5. without cause once a day

Cries
____ 1. rarely or never
____ 2. only in response to external stimuli; less than once a day
____ 3. only in response to external stimuli; at least once a day
✓ 4. for no apparent reason less than once each day
____ 5. for no apparent reason once or more each day

Is irritable or aggressive *(becomes angry, curses, pushes, or attempts to hurt others)*
____ 1. rarely or never
✓ 2. only in response to external stimuli; less than once each day
____ 3. only in response to external stimuli; at least once each day
____ 4. without cause less than each day
____ 5. without cause once or more each day

Has a facial expression of discomfort- *appears unhappy or in pain (looks worried, grimaces, furrowed or turned down brow)*
✓ 1. rarely or never
____ 2. less than once a day
____ 3. at least once a day
____ 4. nearly half the day
____ 5. most of the day

Enjoys eating
✓ 1. at most meals and snacks
____ 2. twice a day
____ 3. at least once a day
____ 4. less than once a day
____ 5. rarely or never

Enjoys touching/being touched
✓ 1. almost always; almost always initiates touching
____ 2. more than half the time; sometimes initiates touching
____ 3. half the time; never initiates touching, but does not resist touching
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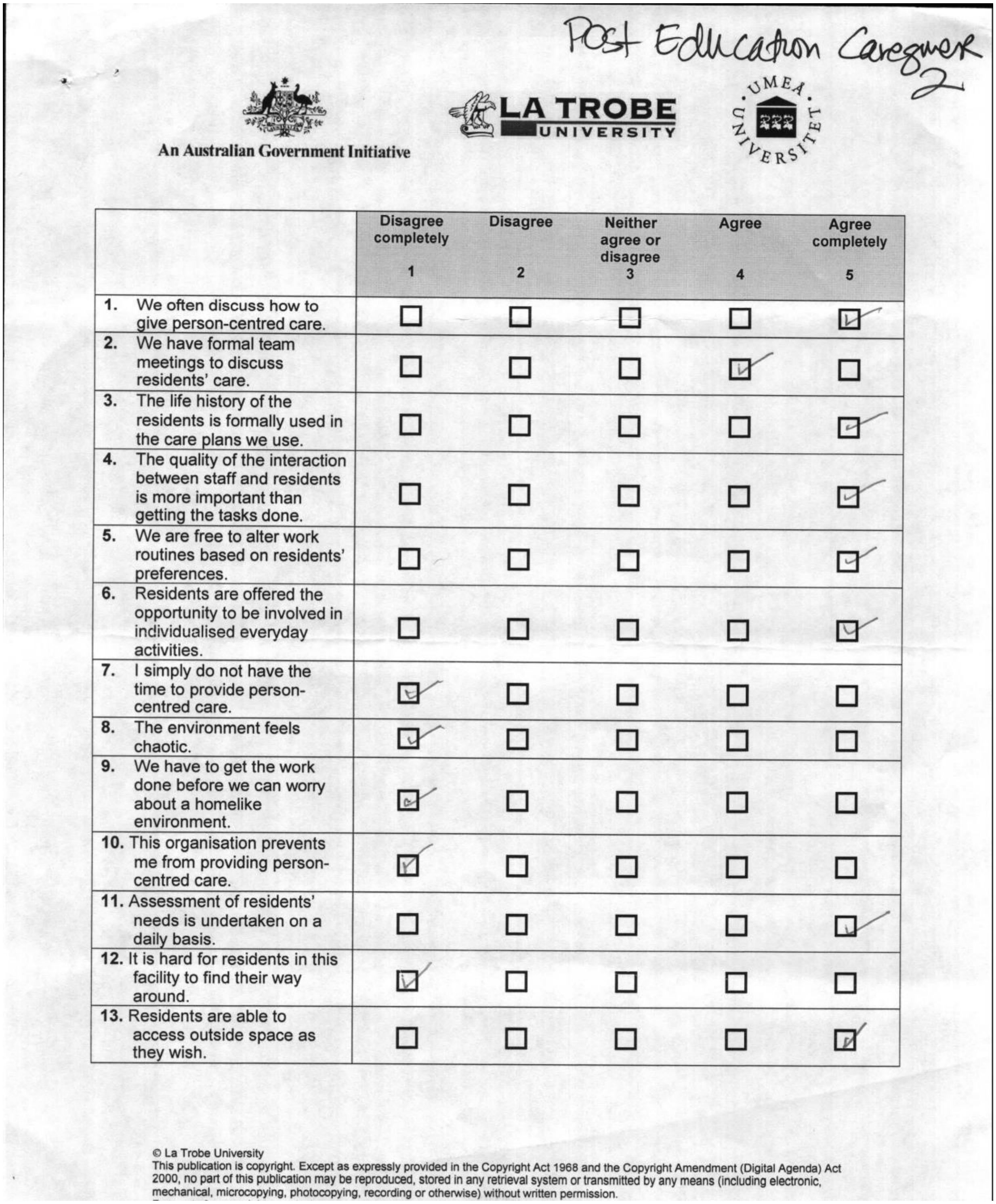
____ 5. rarely or never; almost always resists touching/being touched

Enjoys interacting or being with others
✓ 1. almost always: almost always initiates interaction with others
____ 2. more than half the time; sometimes initiates interaction with others
____ 3. half the time; never initiates interaction, but does not resist interactions with others
____ 4. less than half the time; often or frequently resists interaction with others
____ 5. rarely or never; almost always resists interaction with others

Appears emotionally calm and comfortable
✓ 1. most of the day
____ 2. more than half the day
____ 3. half the day
____ 4. less than half the day
____ 5. rarely or never



Post Education Caregiver 2

An Australian Government Initiative

LA TROBE UNIVERSITY

UMEÅ UNIVERSITET

	Disagree completely 1	Disagree 2	Neither agree or disagree 3	Agree 4	Agree completely 5
1. We often discuss how to give person-centred care.	☐	☐	☐	☐	☑
2. We have formal team meetings to discuss residents' care.	☐	☐	☐	☑	☐
3. The life history of the residents is formally used in the care plans we use.	☐	☐	☐	☐	☑
4. The quality of the interaction between staff and residents is more important than getting the tasks done.	☐	☐	☐	☐	☑
5. We are free to alter work routines based on residents' preferences.	☐	☐	☐	☐	☑
6. Residents are offered the opportunity to be involved in individualised everyday activities.	☐	☐	☐	☐	☑
7. I simply do not have the time to provide person-centred care.	☑	☐	☐	☐	☐
8. The environment feels chaotic.	☑	☐	☐	☐	☐
9. We have to get the work done before we can worry about a homelike environment.	☑	☐	☐	☐	☐
10. This organisation prevents me from providing person-centred care.	☑	☐	☐	☐	☐
11. Assessment of residents' needs is undertaken on a daily basis.	☐	☐	☐	☐	☑
12. It is hard for residents in this facility to find their way around.	☑	☐	☐	☐	☐
13. Residents are able to access outside space as they wish.	☐	☐	☐	☐	☑