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Improving Nursing Knowledge, Satisfaction, and Retention in Long Term Care

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This is to certify that the doctoral study by

Ghislaine Barry

has been found to be complete and satisfactory in all respects,
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2017

Abstract

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MS, University of Maryland, Baltimore, 2005

BSN, University of the Virgin Islands, 1997

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Project Submitted in Partial Fulfillment

Of the Requirements for the Degree of

Doctor of Nursing Practice

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Abstract

Through advancements in modern medicine, human beings worldwide are living longer. The increase in life expectancy creates a need for a more qualified and knowledgeable nursing workforce for the delivery of quality geriatric health care. Although nurses are the primary care providers for vulnerable older adults, they are generally not well trained or prepared in geriatric care. Therefore, the purpose of the project was to develop an education program aimed at improving nursing knowledge of geriatric care in the long-term care (LTC) setting. The goal of the project was to answer the research question: What impact would attendance in the program have on improving nursing geriatric knowledge, retention, and job satisfaction by project end? Guided by the advancing research and clinical practice through close collaboration (ARCC) model for evidence-based practice (EBP), the learning needs of nurses in the LTC setting were assessed. The 6-week education program was designed to provide education on the basics of geriatric care, pharmacology and aging, symptom evaluation, dementia care, and geriatric physical assessment. Project participants consisted of 8 nurses who volunteered to take part in the program. The program was evaluated using a pre-test and post-test method to examine nurse's knowledge before and after the education program. Using a paired *t* test, the results indicated a significant increase ($p<.05$) between the mean pre-test (*3.75*) and mean post-test (*4.25*) scores of nurse knowledge of geriatric care. The education program improved participant knowledge of geriatric care. Positive social change will be achieved with this scholarly project as nurses with greater knowledge gain confidence, strengthen decision making and clinical skills, and improve patient outcomes in the LTC setting.

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Dedication

First and foremost, I would like to give thanks to almighty God for getting me through this difficult journey. I would like to dedicate this project to my late father who had so much faith in me and always reminded me of how strong I am. I know that you are proud of me and are rejoicing in my success. I love and miss you every day.

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I would like to thank my family and friends for believing in me and supporting me throughout my journey, I could not have done it without you. To my mother, thank you for helping understand that education is my biggest weapon. To my husband, thank you for holding me tight through the roller coaster ride. To my three children, thank you so much for all your help and for having so much faith in me. I am so proud to be your mother. Special thanks to my daughter Sophie, my rock, for sitting me down and making me get it together. To my sisters, thank you for loving me all my life. We are family. Special thanks to my sister Maggie for helping me power through the tough times. Thank you to my work colleagues for supporting me. Thank you to the nurses who participated in the study, I really appreciate your confidence in me. Thank you to Teresa Robinson, my mentor, for opening the door and trusting me to do my thing. Thank you to all the professors at Walden who educated me on the road to accomplishing my goal. Thank you to my committee members Dr. Nichols, Dr. Jaekel, and Dr. Naser for your guidance. Thank you to Dr. Long and Dr. Moss for your assistance and feedback. Lastly, thank you to Sarah Matthey from Form and Style for taking the time to edit my very long paper.

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Introduction

Due to changes in lifestyle and medical advances, human beings worldwide are living longer. Humans are expected to live an average of 18 years longer than they did 100 years ago (Wallace, Greiner, Grossman, Lange, & Lippman, 2006). In the United States, the geriatric population, defined as people 65 year of age and older, is expected to experience growth during the next 4 decades. According to the U.S. Census Bureau (2014), the projected 2015 life expectancy was 78.9 years compared to 70.8 years in 1970. This increase in older population has implications for the U.S. health care systems (Oster & Oster, 2015).

Between 2010 and 2050, the number of older adults is projected to double from 40.2 million to 88.5 million (Donahue, Kazer, Smith, & Fitzpatrick, 2011). The number of U.S. citizens' aged 65 and older is also expected to grow by 80% between 2010 and 2030 (Oster & Oster, 2015). Currently, the fastest growing age group in the United States is adults 85 years and older with an average of three chronic illnesses (Donahue et al., 2011). The amount of health care required by seniors is driven not by age but by the number of chronic health conditions (Charles, Dobbs, Triscott, & McKay, 2014).

The unprecedented influx in the geriatric population has created a need for a more qualified and knowledgeable nursing workforce for the delivery of health care services. Although older adults are healthier than they have been in the past, they have acute and chronic medical conditions that require more extensive nursing care (Wallace et al., 2006). Because of their advanced age, many older adults experience the effects of chronic diseases and are developing more complicated health problems (Cook, Dover, Dickson, & Engh, 2010). These problems are compounded by the natural physiological changes of aging that predispose elderly

patients to a variety of health-related issues. The complexities of these health problems necessitate a better educationally prepared nursing workforce (Cook et al., 2010) with an advanced understanding for the needs of older adults.

Many issues in the long-term care (LTC) setting affect the quality and delivery of safe nursing care to geriatric patients, including high percentage of licensed practical nurses (LPNs) with limited experiential knowledge, lack of basic geriatric knowledge by registered nurses (RNs), job dissatisfaction, and poor staff retention. For the purpose of this study, these issues were further explored.

Lack of nursing geriatric knowledge in LTC can lead to many negative patient consequences and is influenced by multiple factors, including level of education, length of employment, amount of training, access to continuing education, organizational resources, and number of years in practice. Skilled nurses can contribute to higher quality of life for older patients and patient outcomes improve when older adults receive care from nurses with geriatric training (Wendel, Durso, Cayea, Arbaje, & Tanner, 2010). Yet, many nurses caring for elderly patients have limited exposure to education in gerontology or were not well prepared in geriatric care (Donahue et al., 2011). The reasons for the deficiency in geriatric knowledge in the LTC setting are twofold: (a). the high number of LPN's with limited experiential knowledge, and (b). the RNs entering the setting with insufficient geriatric training.

Many health care facilities are examining their nursing staff's educational preparation and scope of practice and are reducing or eliminating LPN positions in favor of RNs (Cook et al., 2010). LPN educational preparation requires less time and content than an RN education. The average LPN education curriculum is 12-18 months compared to 2-4 years for RN education (Cook et al., 2010). Because of the shorter period of LPN training, many health care providers

believe that the complexity of providing care to the geriatric patient requires the knowledge and skill set of an RN (Cook et al., 2010). Despite findings that higher levels of RN staffing in nursing homes are related to better quality of care, about 70% of licensed care in nursing homes is provided by LPNs rather than RNs (Corazzini, Anderson, Mueller, Thorpe, & McConnell, 2013).

Many RN's do not have the adequate amount of educational exposure to prepare them for caring for older patients. Undergraduate nursing programs may include some geriatric content (Wendel et al., 2010) that may be insufficient in preparing new graduate nurses entering the LTC setting. Efforts have been made to accommodate the increasing older adult population and their care needs by improving the gerontology nursing curriculum of nursing schools (Donahue et al., 2011), designed to increase the supply of qualified nurses. Although strides have been made in geriatric nursing education, there continues to be a need to increase preparation of nurses in geriatric care (Donahue et al., 2011).

The Institute of Medicine (IOM, 2008), included recommendations for addressing the geriatric education needs of nurses and other clinicians to improve the overall care of older adults, The IOM stated that health care workers receive little geriatric training and are not prepared to deliver the best possible care to older patients. The IOM concluded that the health care workforce requires enhancement in education and training to handle the needs of a new generation of older people in the United States. Nurses are the largest health care provider group for older adults and are vital to meeting the diverse health care needs of these patients (Gray-Micell et al., 2014). Ensuring appropriate education and training of geriatric nurses is crucial to meeting the health care needs of older patients.

Another issue impacting safe patient care in the LTC setting is staff retention. Nurses represent the largest population of health care workers in the United States, with an estimated 3 million individuals licensed nationally (Carthon, Nguyen, Chittams, Park, & Gureverra, 2014). Yet, many organizations are having difficulty retaining nurses. Nursing care is one of the largest line items in hospital budgets, estimated to account for 25% or more of annual operating expenses and as much as 40% of direct care costs (Aiken et al., 2011). Nursing turnover and retention issues impact organizational budgets and the people most in need of those services.

Workforce turnover is defined as the rate at which an organization gains and loses employees; it may also be determined in terms of how long employees stay in their employment position (Currie & Hill, 2012). A high rate of turnover means that employees have a shorter average tenure at their place of employment than those organizations with low turnover (Currie & Hill, 2012). Organizations attempt to retain employees as long as possible because of the time and expense involved in training new personnel. The longer an employee stays at an organization, the better return on their investment employers have.

Worldwide, average nursing turnover rates range from 10-21% annually, with the United States reporting rates greater than 20% (Cowden & Cummings, 2012). This figure is in the high range, which falls between 20-44% (Li & Jones, 2013). The American Nurses Association (ANA, 2010) reported that 53% of nurses were considering leaving their current position. In the United States, the national average turnover rate was estimated to be approximately 14% for bedside RNs, and almost 28% for RNs in their first year of employment (Li & Jones, 2013).

Organizations typically spend a significant amount of effort on training new personnel, only to have them resign within a short period of time. The costs are related to spending money on replacing nurses who leave, as well as advertising, recruiting, and training new employees (Li

& Jones, 2013). Depending on the setting, the overall costs of nurse turnover ranges from $22,000 to over $64,000 per year per nurse turnover (ANA, 2009). Replacement costs for an RN is estimated to range from $10,000 to $145,000 per nurse depending on the specialty area, level of experience, and clinical skills (Tucker & Sherrod, 2011). Retaining as many nurses as possible makes fiscal sense for any organization (Hairr, Salisbury, Johannsson, & Redfern-Vance, 2014).

Several reasons have been cited in literature for nursing retention issues, including scheduling conflicts, job dissatisfaction, insufficient salary, burnout, and work place stress. Nurses experiencing high levels of job satisfaction are less likely to leave, express intentions of staying, and are more committed to organizational goals (Cowden & Cummings, 2012). Researchers have positively linked lack of job satisfaction to organizational retention issues. In fact, scholars have revealed a relationship between low job satisfaction and high nursing turnover with some showing a correlation between job dissatisfaction with intent to leave the nursing profession altogether (Palmer, 2014). Duffied, Roche, O-Brien-Pallas, Catling-Paull, and King (2009) evaluated factors impacting nurse job satisfaction and intent to leave and found that nurses who were intending to remain in their job were more likely to be satisfied, be older, and have dependents. Other issues that impact nursing satisfaction and turnover include salary, insufficient staffing, imbalanced nurse to patient ratios, undervaluing of nurses by management and the medical team, limited advancement opportunities, and lack of autonomy (Palmer, 2014).

The doctoral project had the potential to positively socially change the manner in which participating nurses care for geriatric patients based on newly acquired knowledge that could lead to improvements in patient health outcomes.

Problem Statement

As the U.S. population ages and the proportion of individuals over the age of 65 expand, the demand for high quality nursing home care will increase (Hunt et al., 2012). The large number of aging Baby Boomers is placing demands on all aspects of the health care system, including the services of nurses (Rajapakasa & Rothstein, 2009). Issues with nursing geriatric knowledge, staff retention, and job dissatisfaction affect the older population who are most in need of health care.

In the LTC setting, nurses who possess specialized geriatric knowledge contribute to better outcomes for frail, elderly nursing home residents (Bourbonniere & Strumpf, 2008). In this doctoral study, I investigated the extent to which lack of nursing geriatric knowledge, job dissatisfaction, and poor staff retention impacted nursing personnel and quality of patient care in the LTC setting. I also examined strategies that have been used to address and resolve those issues, specifically in the LTC setting. The intervention developed to address the problems was an educational Power Point program. The program was designed to provide basic geriatric knowledge to nurses' to increase their understanding of the needs of the vulnerable population they serve while promoting staff retention, which is significant to nursing practice.

Lack of nursing geriatric knowledge is an issue in many LTC settings. The problem begins at the academia level because many RN and LPN nursing programs do not include an adequate amount of geriatric content in their curricula. There has been an improvement in the integration of required geriatric content into the baccalaureate curriculum; however, most nurses who have been practicing more than 5 years have not benefited from the curriculum change (Donahue et al., 2011)

Increasing nursing knowledge will have a positive effect on elderly patients, a population that requires expert and knowledgeable nursing care delivered with respect and appreciation for their needs (Donahue et al., 2011). Patient outcomes improve when older adults receive care from nurses with geriatric training (Wendel et al., 2010). The current nursing workforce is underprepared for the clinical challenges they face with a frail and complex elderly population (Bourbonniere & Strumpf, 2008). Therefore, the development of a continuing education strategy is essential to promoting the acquisition of fundamental geriatric knowledge for nursing home personnel (Bourbonniere & Strumpf, 2008).

Retention is another problem in the workforce. Within the nursing profession, lack of retention has implications for quality of patient care and safety (Dunn, 2012). High turnover rates of nurses are associated with poor wellbeing of nursing personnel and increased costs in staff recruitment and training (Gao, Newcombe, Tilse, Wilson, & Tuckett, 2014). When nurses leave their positions, the burden of care falls on remaining staff by means of higher patient loads, longer hours, and added stress. In addition to being cost intensive, turnover is negatively associated with organizational performance (Wendsche et al., 2014). High nursing turnover is linked to poor outcomes among nursing home residents and has been correlated with increased incidences of infection, hospitalizations, pressure ulcers, contractures, and catheter use (Hunt et al., 2012). Nursing turnover in residential aged homes has also been correlated with poor outcomes among residents, increased incidences of falls, medication errors, and restraint use (Hunt et al., 2012).

The annual turnover rate in U.S. nursing homes was 56% for RNs, and 51% for LPNsHunt et al., 2012). Recruiting and retaining RNs in this setting is problematic (Venturato & Drew, 2010). Many LTC facilities have had to redesign their models of care and staffing in

order to provide services to their residents (Venturato & Drew, 2010). Although multiple strategies have been proposed and used to retain nurses, an understanding of the underlying causes for the loss of personnel to a workforce is necessary to inform retention strategies (Currie & Hill, 2012). Educational programs have been used successfully in many settings to promote professional achievement, self-growth (Hunt et al., 2012), and improve staff knowledge.

A needs assessment was conducted with organizational personnel to get a better understanding of the issues that impact patient safety, to identify best strategies to resolve them, and to categorize priorities. The decision to use an educational intervention came as a result of reviewing multiple patient charts for missed opportunities and extensive conversations with individual nurses. In-depth conversations with the nurses aided in focusing the project on a strategy that would address the identified gaps in practice, specifically improving geriatric knowledge, job satisfaction, and retention rates.

One way of decreasing nursing turnover in the LTC setting may be to increase geriatric knowledge and job satisfaction. The presentation method and the importance of the information to the nursing staff would determine if this strategy was beneficial at improving overall nursing geriatric knowledge, job satisfaction, and retention rates at this organization. Also, participation in continuing education activities, such as this project, provides a measure of assurance that practitioners are maintaining and updating their professional knowledge and serves as a proxy for assuring ongoing competence (Trewet & Fjortoft, 2013), which is significant for the field of nursing practice.

Purpose Statement

Gaps exist between the number of older adults requiring competent geriatric care and the number of nurses able to provide it (Wallace et al., 2006). The purpose of this doctoral project

was to describe the development, implementation, and evaluation of a geriatric educational program aimed at improving nursing geriatric knowledge, job satisfaction, and retention rates at a LTC organization. A gap in practice was identified through literature analysis, patient chart reviews, and a needs assessment, which was conducted with organizational personnel who helped to identify a lack of geriatric knowledge, job satisfaction, and retention as priority issues in need of addressing. Program findings would determine if the design method was effective at improving nursing geriatric knowledge, job satisfaction, and retention rates as anticipated.

Nature of the Doctoral Project

An interactive, 6-week hour long Power Point teaching program was designed to improve nursing geriatric knowledge, job satisfaction, and retention in the LTC setting. The topics included: basic geriatrics for LTC nurses, pharmacology and aging, physiological changes of aging, geriatric symptom evaluation, geriatric physical assessment, and care of the older adult with dementia. The project addressed the gap in practice by providing participating nurses with geriatric information via an educational strategy to increase geriatric knowledge, job satisfaction, and retention rates. After attending the sessions, the projected outcome was that participating nurses would have a better understanding of the needs of the vulnerable geriatric population they serve.

A pretest-posttest design method was used to collect, organize, and analyze data from participating nurses regarding their geriatric knowledge, job satisfaction, and intent to stay, which would help to answer the guiding focused question: What impact will attendance in the program have on improving nursing geriatric knowledge, job satisfaction, and retention rates by the end of the program? The data generated from participant survey responses served as the evidence to meet the purpose of this doctoral project.

The purpose of this doctoral project was to develop, implement, and evaluate a geriatric nursing education program aimed at improving gaps in geriatric knowledge, job satisfaction, and staff retention. Through a needs assessment, organizational personnel identified these as priority issues.

Program Objectives

1. Examine and analyze existing literature on nursing geriatric knowledge, job satisfaction, and retention.
2. Design and develop a continuing education program to address gaps in practice, and improve performance.
3. Implement the continuing education program over a 6-week period to improve nursing knowledge and job satisfaction by 15-20% by project end.
4. Evaluate the effectiveness of the continuing education program by comparing the knowledge, satisfaction, and retention rates of participating nurses at the pretest stage and posttest stages.

Guiding/Practice/Research Questions

This research project was guided by the following evidence-based practice questions:

1. What impact will attendance in the continuing education program have on improving nursing geriatric knowledge, job satisfaction, and retention rates by project end?
2. Which group of nurses, RNs or LPNs, will show a greater increase in geriatric knowledge, job satisfaction, and retention on posttest scores?
3. After the program, will retention rates be higher in nurses who have been employed at the organization less than 5 years or more than 5 years?

Significance/Relevance to Practice

This doctoral project had the potential to change the manner in which geriatric nurses' care for patients through the development of a deeper understanding of the needs of the older population. The project also had the potential to improve geriatric knowledge which could help improve nursing practice and overall patient health outcomes. Project stakeholders include: the nursing staff who may benefit from the acquisition of increased geriatric knowledge, the patients who may benefit from improved care, and, the organization that may benefit through decreased costs of adverse events. Because elderly patients receive care in a variety of settings, the findings from this doctoral project may be transferrable to many similar practice areas.

Nurses at this LTC organization identified a lack of geriatric knowledge, low job satisfaction, and staff retention as priority issues that affect day-to-day practice and interrupt continuity of patient care. The organization was home to approximately 152 LTC residents ranging in age from 36 to 100 and a rehabilitation unit housing 27 residents. According to the nursing staff, most of the residents have a variety of chronic health problems and value consistency in nursing care.

There were 57 nurses employed at the organization with different levels of education, age ranges, gender, and tenure. The nurse with the longest tenure had been with the organization for over 30 years and the one with the least tenure had been with the organization for only 5 months. Breakdown of nursing personnel included 44% RNs compared to 56% LPNs. This high number of LPNs is consistent with similar LTC settings, which literature has cited as problematic. Of the RNs employed at the organization, 80% were associate-degree-prepared compared to 20% bachelor's-degree-prepared. The organizational context, such as nurse staffing levels and staff mix, is known to influence quality outcomes in nursing homes (Corrazzini et al., 2013).

Approximately 50% of nursing staff had been employed less than 1year, which suggested a high rate of nursing turnover and a retention problem. Organizational leaders revealed the 2014 nurse retention rates at 60% for RNs and 81% for LPNs.

Evidence-Based Significance of the Project

There is a general lack of knowledge and skills among nursing staff regarding geriatric care (Donahue et al., 2011). Because patient outcomes improve when they receive care from nurses trained in geriatrics, increasing nursing knowledge may lead to decreased patient adverse events, especially in LTC where the majority of the population are frail and vulnerable. To provide geriatric care that is effective in meeting the complex care needs of older adults, education in best geriatric nursing practices is necessary and must be provided to nurses who are caring for older adults (Donahue et al., 2011).

The shortage of health practitioners is a global problem, which leads to negative consequences for health service accessibility and health outcomes in the affected populations (Buykx, Humphreys, Wakerman, & Pashen, 2010). Good workforce retention contributes to ensuring the provision of high quality health care because it is usually associated with increased experience and skills among staff and greater continuity of care for patients (Buykx et al., 2010).

Many factors influence health care workers' decision to stay or leave a job, including financial and economic considerations, organizational issues such as professional development opportunities, and social factors such as educational opportunities (Buykx et al., 2010). Uncontrollable nursing turnover is another factor that affects retention and includes: retirement, moving from area, and failure to return from leave (Murff & DeFer, 2010). The goal of workforce retention strategies is to address avoidable turnover of staff (Buykx et al., 2010). The World Health Organization (WHO, 2010) identified three categories of intervention to

address poor workforce retention, including: (a). education and regulatory interventions; (b). direct and indirect monetary compensation; and (c). management and social support.

Reduction of Gaps

The scholarly project was directed toward reducing the gap in geriatric knowledge, job satisfaction, and retention by providing participating nurses with a continuing education retention promotion strategy aimed at increasing their understanding of the needs of the vulnerable geriatric population they serve while promoting professional growth and development. Education opportunities and professional development programs contribute to nurses' intention to remain employed (Hunt et al., 2012) and should result in improved nursing knowledge and job satisfaction.

Implications for Social Change

Nurses who attended the program may benefit from the geriatric information designed to boost confidence in overall geriatric knowledge, improve geriatric assessment skills, and establish evidence-based care strategies for older patients. Educational intervention methods have been used to promote professional growth and development, which scholars have shown to be successful strategies to increase nursing knowledge, job satisfaction, and retention rates in many settings.

Increasing nursing knowledge should have a positive impact on patient outcomes, improve consistency in care, influence the organization's budget due to lower staff turnover rates, and increase job satisfaction. Attendance in the program could also affect the way nurses provide care to their patients by increasing their understanding of the needs of the elderly patients, as well as to empower them with the knowledge necessary to improve decision making and clinical care skills. Also, a more knowledgeable nursing workforce may lead to reduced

overall health care costs and spending through early identification of patient health problems, which is beneficial to health care facilities, providers, patients, and state/local/federal governments.

Definition of Terms

Although these terms have been used interchangeably referencing retention, for the purpose of this project, the following definitions are accepted:

Nurse intent to stay: The stated probability of an individual staying in his/her present position (Nedd, 2006).

Nursing retention: Keeping nurses in nursing work and in the profession (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002).

Nursing shortage: A situation in which hospitals and organizations are unable to hire nurses at prevailing wages to achieve the staffing desired (Grimbach, Ash, Seago, Spetz, & Coffman, 2001).

Nursing turnover: The number of nurses leaving an organization within the past year compared to the number of nurses currently on staff in that position (Reinier et al., 2005).

The following terms are used interchangeably in literature referencing the older adult aged 65 and older, for the purpose of this project, the following terms are accepted: *Elderly, geriatric, gerontology, senior.*

Assumptions and Limitations

Because interest was generated on the project topics by individual nurses who were shadowed, an assumption was that at least 50% of the nursing staff would attend the program. In reality, only 14% of the nurses attended.

There were many limitations to this project. First, the small sample size of only 8 participants may make the project not generalizable. Further, the scheduling conflicts impacted the actual number of nurses who could participate. Some nurses attended the sessions after working the late evening or night shift and had to double back, other nurses were scheduled to work immediately following the program. Next, the program took place in a LTC setting, which may not make the results generalizable to other settings such as hospitals. Another limitation was the 6-week time frame set for project completion, which may have been too short to evaluate the effectiveness of the program. The final limitation was the lack of participant randomization. When participants are not randomly assigned to groups, the researcher faces the possibility that groups being compared are not equivalent threatening the study's internal validity, referred to as selection bias (Polit, 2010). The use of a comparison group and repeated measures offered partial control over validity, selection threats, and bias (Duff, Gardner, & Osborne, 2014). The design method was also considered robust to internal validity threats and more adaptable to clinical practice settings than controlled experimental designs (Duff et al., 2014).

Summary

Multiple issues impact the delivery of safe care to older patients, especially in the LTC setting where the majority of patients are frail and vulnerable. Lack of geriatric knowledge, job dissatisfaction, and poor retention are examples of issues that impact geriatric patients and the nursing personnel caring for them.

Through the development of new technology and an emphasis on health promotion, human beings are living longer. Seniors are frequent recipients of health care services, costing health care systems more than any other segment of the population (Charles et al., 2014). Although this demographic phenomenon is to be celebrated, it is also expected to place

increasing demands on those who care for older adults - a group that uses more services and whose health and LTC needs are often more complex (Stone & Barbarotta, 2011).

Health care environments are challenged by issues associated with recruitment and retention (Venturato & Drew, 2010), especially of qualified, knowledgeable nursing personnel. This is true in LTC where RN numbers are already limited, and resident acuity is rising (Venturato & Drew, 2010). Shortage of nursing professionals in this setting is felt among this client population with multiple complex health issues, co-morbidities, and increasing frailty (Venturato & Drew, 2010).

Many solutions have been proposed and used to resolve lack of nursing geriatric knowledge, job dissatisfaction, and poor staff retention issues. This project was undertaken to evaluate those issues and to develop a program to improve nursing geriatric knowledge, job satisfaction, and staff retention rates at a LTC facility by exploring an educational strategy. A needs assessment was conducted to identify priority issues and a literature review was conducted to explore various methodologies and strategies that have been used to address the issues. In Section 2, I will present literature that includes studies of LTC issues, general literature, and the evidence-based model that was used to guide the study.

Section 2: Review of Scholarly Evidence

Introduction

Lack of nursing geriatric knowledge, job dissatisfaction, and poor staff retention are issues that have led to challenges in many health care settings. The purpose of the scholarly project was to develop, implement, and evaluate a continuing education program aimed at improving nursing geriatric knowledge, job satisfaction, and staff retention at a LTC facility. The project was guided by the following practice question: What potential impact will attendance in the geriatric continuing education program have on improving nursing knowledge, job satisfaction, and retention rates by project completion?

Multiple strategies have been proposed and used to resolve the lack of nursing geriatric knowledge, job dissatisfaction, and poor retention of nursing personnel in the LTC setting, including retention bonuses, fellowship, education, and mentorship programs. In order to get a better understanding of the magnitude of the problem and to evaluate current strategies being used in practice, a literature review was conducted using the Walden University Cumulative Index to Nursing and Allied Health Literature (CINAHL) databases. I used the main search terms *nursing retention, nursing turnover, nursing intent to stay, nursing shortage, nursing knowledge, long-term care, geriatrics, nursing satisfaction,* and *nursing job satisfaction* to search for peer-reviewed articles published in English between the years 2000-2016.

Studies pertaining to the LTC setting will be found in the specific literature section. Studies on nursing knowledge, job satisfaction, and staff retention in any setting will be found in the general literature section. The model that was used to guide this scholarly project will be found in the EBP model section. An overview of the literature section will be found in the summary section.

Literature Review

Specific Literature

In a quasi experimental, pretest-posttest study, Rosswurm, Larrabee, and Nunley (2003) examined the outcomes of an educational program on improving nursing geriatric knowledge. Rosswurm et al. reported a significant increase in geriatric knowledge following the program and concluded that continuing education programs are useful methods to improve geriatric knowledge of health care professionals. Roethler, Adelman, and Parsons (2011) conducted a needs assessment of an emergency department concerning RNs' knowledge of geriatric emergency care and revealed that although participants rated themselves highly on geriatric care, they scored low on the knowledge section. Roethler et al. concluded there was a lack of consistency between nurses' knowledge about geriatric care and their perceptions of their ability to provide this care. Wendsche et al. (2014) aimed to identify direct and indirect linkages between geriatric care setting, rest break organization, and nurse turnover over a 1 year period. Wendsche et al. found a significant difference in rest break organization in geriatric care settings and highlighted the role of collective rest breaks as a strategy for nursing staff retention. Gao, Newcombe, Tilse, Wilson, and Tuckett (2014) tested two theoretical models of turnover to examine the relationships among job demands, coping resources, and turnover of residential aged care nurses. Gao et al. found that policy makers and service providers should consider increasing coping resources to nurses and minimizing job demands to reduce turnover rates. Kuo, Lin, and Li (2014) explored the mediating effects of job satisfaction on work stress and turnover among LTC nurses in Taiwan and found that higher job satisfaction significantly decreased work stress and turnover among LTC nurses.

General Literature

Cowden and Cummings (2012) conducted a review of articles between 1985 and 2011, to understand the causal influences on nurses' intent to stay and found that multiple strategies may result in higher retention numbers. Lavoie-Tremblay et al. (2010) compared work climate perceptions and intentions to quit among three generations of hospital workers and nurses. Lavoie-Tremblay et al. found that retention strategies that focus on improving work climate are beneficial to all generations of nurses. Van den et al. (2013) examined the impact of nursing practice environment, nurse staffing, and nurse education on nurse reported intention to leave the hospital. Van den et al. found that investing in improved nursing work environments is a key strategy to retain nurses. Friedman, Delaney, Schmidt, Quinn, and Mack (2013) reviewed a strategy for nursing retention and its financial impact and found the specialized orientation new graduate RN program increased RN retention and decreased turnover.

Evidence-Based Practice Model

Evidence-based practice (EBP) models can support an organized approach to implementation of EBP, prevent incomplete implementation, improve use of resources, and facilitate evaluation of outcomes (Schaffer, Sandau, & Diedrick, 2012). The model that was used to support the research efforts and projected outcomes of this project was the advancing research and clinical practice through close collaboration (ARCC) model. I used this model because it had been used in LTC settings and in studies on turnover rates that are associated with nursing retention; the model also served as a roadmap for implementing this evidence based project.

The ARCC model focuses on EBP implementation and promotes sustainability at a system-wide level (Schaffer et al., 2012). The five steps of this model include: (a). assessment of

organizational culture and readiness for implementation in the health care system; (b). identification of strengths and barriers of the EBP process in the organization; (c). identification of the EBP mentor; (d). implementation of the evidence into organizational practice; and (e). evaluation of the outcomes resulting from practice change (Schafer et al., 2012).

Levin, Fineout-Overholt, Melnyk, Barnes, and Vetter (2011) piloted the implementation of the ARCC model with nurses working in a community health home care setting. Levin et al. randomized a convenience sample of 46 nurses to experimental and control groups. The experimental group received didactic content on EBP, an EBP toolkit, and an EBP mentor, while nurses in the control group were given didactic content on physical assessment. The EBP mentored group had a significant improvement in EBP beliefs, and had nearly a 50% reduction in the group turnover rate during the study time period.

The ARCC model uses multiple steps in the implementation of EBP; including examining and assessing the organization's culture and readiness for change. EBP is the integration of clinical expertise, patient values, and the best research evidence to inform the decision-making process for patient care (Harding, Potter, Horne-Thompson, Donley, & Taylor, 2014). Examining culture and readiness is a key step in determining if an organization is ready for change or if there will be resistance to change from staff, which is considered a barrier to the process. The right design approach may influence the participating nurses' decision to change current practice and embrace the proposed educational program.

Role of the DNP Student

As a Walden University Doctor of Nursing Practice (DNP) student, I completed a practicum at the site. My role in the doctoral project was to design, develop, implement, and evaluate a continuing education program aimed at improving nursing geriatric knowledge, job

satisfaction, and staff retention. While conducting a needs assessment, I became familiar with many of the participating nurses. As a Women's Health Nurse Practitioner (WHNP), LTC is not my area of expertise. To get a better understanding of the role of the geriatric nurse, I shadowed many of the nursing staff. My motivation for this doctoral project was to execute a program that would improve issues identified by the nursing staff as important. I also wanted to help improve patient health outcomes. Because I had no relationship with the staff prior to completing my practicum, there were no biases.

Summary

In this literature review, I highlighted the magnitude of the problems that impact patient safety and outlined strategies that have been used to resolve them. I also confirmed that education strategies are beneficial at resolving many issues that influence quality patient care in the LTC setting, specifically nursing geriatric knowledge, job satisfaction, and staff retention. Although multiple studies were reviewed, the research did not reveal a consensus on the one best strategy to resolve the problems. Strengths of the studies included: current knowledge in the areas being investigated were identified, the design methods used in all of the studies were appropriate for examining the issues and for generating specific data, data collection methods were ethical, and results were interpreted appropriately (Grove, Burns, & Gray, 2013). Because an evidence-based approach was used for the implementation of this project, the ARCC model was most appropriate to use as a guide.

A gap in geriatric knowledge, job satisfaction, and staff retention were identified through a needs assessment and comprehensive literature review. This doctoral project filled the gap by providing participating nurses with a continuing education strategy designed to improve their current knowledge and increase their understanding of the vulnerable older population they

serve. A pretest-posttest design method was used to gather evidence and measure program outcomes. The rationale for using this method will be examined in detail in the next section.

Section 3: Approach

Introduction

Improving nursing knowledge, job satisfaction, and staff retention in response to the growing demand from an expanding geriatric population, has been established in the research. A significant number of nursing personnel in the LTC setting lack the adequate amount of geriatric training to provide safe care to the vulnerable older patients they serve. Researchers have highlighted the association between lack of geriatric knowledge, low job satisfaction, and poor staff retention to negative patient outcomes. The purpose of the doctoral project was to develop, implement, and evaluate a continuing education program aimed at improving nursing geriatric knowledge, job satisfaction, and staff retention, which were issues identified by organizational personnel through a needs assessment.

A literature review and needs assessment was conducted to evaluate the best strategies to resolve the issues, with no consensus on the one best solution. After deliberation, the quasi experimental method was chosen. In this section, I will review the design method, population and sampling, data collection methods, protection of human subjects, data analysis, and the evaluation plan.

Project Design/Method

Globally, people are living longer and are requiring care from nurses qualified to meet their complex needs. Gaps exist between the health care needs of older people and the number of qualified nurses. The purpose of the project was to develop, implement, and evaluate a geriatric continuing education program designed to address the following practice focused question: What impact will attendance in the program have on improving nursing geriatric

knowledge, job satisfaction, and retention rates by the end of the program? The pretest-posttest design method is aligned with and intended to answer the practice-focused question.

The purpose of the quasi experimental method is to examine cause and effect relationships among selected variables when participants cannot be randomized (Grove et al., 2013). This method is a good fit because the purpose of the project was to examine the relationships between the dependent and the independent variables; also, study participants were not randomized. The independent variable was the 6-week, hour-long geriatric continuing education program, and the dependent variables were nursing geriatric knowledge, job satisfaction, and staff retention rates. I examined the effect the program (the independent variable) would have on causing change in nursing geriatric knowledge, job satisfaction, and staff retention rates (the dependent variables).

A single group quasi experimental, pre-test and post-test design was conducted to measure the effectiveness of the 6-week, hour-long geriatric population continuing education program comparing nursing knowledge, satisfaction, and retention rates of the attending nurses before and after program attendance. I tested the hypothesis that participation in the geriatric continuing education program would improve nursing knowledge, job satisfaction, and retention rates of participating nurses. The findings provided the answer to and aligned with the practice question: What impact will attendance in the education program have on improving nursing knowledge, job satisfaction, and retention rates by project completion? The study variables were measured by tabulating pretest and posttest survey questionnaire responses.

Population and Sampling

The study was conducted at a nonprofit nursing, rehabilitation, and LTC facility in LaPlata, Maryland. The convenience sample included all eligible nurses (n=57) working full and

part time on the 27-bed rehabilitation unit, and LTC Units *100* (52 beds), *200* (50 beds), and *300* (50 beds). Of the 57 nurses employed at the facility, 25 were (RNs) or 43% and the remaining 32 were (LPNs) or 56%. Inclusion criteria included all direct patient care nurses, regardless of age, level of education, number of years in practice, or tenure at the organization. Exclusion criteria included nursing managers and leaders, medical doctors, nurse practitioners, nursing personnel hired after the start of the program, nurses who did not speak or read English, geriatric nursing assistants (GNAs), and all other non-nursing personnel. Participants included a mix of RNs and LPNs who chose to attend the program.

Details and purpose of the program were explained to nurses either in person or in writing, and questions were answered prior to project implementation. All nurses, regardless of years in practice, age, education level, or tenure at the organization were encouraged to attend all 6 weekly sessions. Program details were reviewed with attendees prior to the start of the of the first 1-hour session.

Data Collection

To support the program purpose of developing and implementing the project, a 7-item pretest and posttest survey was designed with questions pertaining to nursing geriatric knowledge, job satisfaction, intent to stay, and demographic information. Informed consents, letter of invitation, and pretest surveys were placed in individual mail slots of eligible nurses with instructions to complete surveys in private on site. Nurses were directed to place completed surveys and signed consents in a designated drop box for pick up 1 week prior to the start of the program.

Data generated from survey results were collected from participants at two intervals, pre-intervention and post-intervention. Pre-test nursing knowledge, intent to stay, and job

satisfaction surveys were given 1 week prior to the start of the program, and post-test surveys were placed in mail slots and collected 1week following the program. Data from the nurses who attended all 6 sessions counted toward the final numbers. Data from the nurses who did not attend all 6 sessions or attended only a few sessions were discarded. All collected data were analyzed and tallied, which served as the evidence that addressed the practice focus question: What impact will attendance in the continuing education have on improving nursing geriatric knowledge, job satisfaction, and staff retention?

Protection of Human Subjects

After Walden University IRB approval, all nurses employed at the organization (n=57) were invited and recruited to participate in the continuing education program. Details and purpose of the program were explained to all participants prior to program implementation. No incentives were offered for participation. To maintain ethical protection and to adhere to ethical considerations, written informed consent was obtained from all project participants. Participation was fully voluntary, and participants were allowed to withdraw from the program at any time. Although participant names were on the surveys, anonymity was assured by stressing to nurses that only I would have access to the surveys. Results were also presented anonymously. Surveys and USB drives were confidentially stored in locked cabinets in a secure home office to be shredded or destroyed 2 years after the project.

Instrument

The instrument was a 7-item geriatric knowledge, intent to stay, job satisfaction, and demographic characteristic survey used to measure outcome data. Participant demographics information included: gender, age, level of education, and tenure at the organization. I created the survey questions in a way to generate measurable responses. The concepts measured

included geriatric knowledge, job satisfaction, and intent to stay. The constructs measured included the people (RNs or LPNs) and the event (the program). Pre-test surveys were collected 1 week prior to program implementation. On Day 1, the participants received the continuing education intervention. On the 6th and final day, participating nurses received the intervention and completed program evaluations. The same 7-item, post-test survey was placed in mail slots of the participating nurses with instructions and picked up 1week following the program. All results were tallied, analyzed, compared, and evaluated.

The Program

Content for all Power Point modules was generated by extracting relevant geriatric information from peer-reviewed journals and articles. Each week, for a period of 6 weeks, a 1-hour long PowerPoint presentation including slide handouts was delivered to participants as a teaching strategy. The staff educator or designated person arranged the time and place of each session. The sessions were held on Wednesday's and began at 7AM. Each module covered different geriatric topics, including: basic geriatrics for LTC nurses, pharmacology and aging, physiological changes of aging, geriatric symptom evaluation, geriatric physical assessment, and care of the older adult with dementia. To encourage interactive dialogue and audience participation, at the end of each presentation, actual case studies identified through chart review were analyzed by participants pertaining to the topic of the day.

Data Analysis

All results were tallied, analyzed, compared, and evaluated. Reliability of the instrument was tested by calculating Pearson's correlation. Threats to reliability included: participant changes (some nurses did not attend all six sessions) and environmental changes, such as cold or hot rooms. To limit those threats, I encouraged nurses to attend all 6 sessions, and I requested

that all sessions occur on the same day, in the same room, and at the same time of day each week. Validity concern's the degree to which an instrument is measuring what it is supposed to be measuring (Polit, 2010). Construct validity was measured by calculating correlation coefficient. The use of a comparison group and repeated measures was used for partial control over validity (Duff et al., 2014).

Data analysis was conducted using IBM SPSS version 21. All demographic and variable responses were evaluated and converted to numerical data for analysis. Pre-test and post-test nursing knowledge, retention, and job satisfaction were measured using a 5-point Likert-type scale to quantify the information. Participants selected from a number of options including the following: 5=*strongly agree,* 4=*slightly agree,* 3=*neither agree nor disagree,* 2= *slightly disagree,* 1=*strongly disagree.* Higher scores indicated higher levels of knowledge, intent to stay, and job satisfaction. There were no missing data. Descriptive statistics was used to organize, summarize, measure, and compare outcome data from pretest and posttest results. All data were computed as percentages, means, and standard deviation to capture the impact of the program and present demographic characteristics, revealing trends and patterns. Paired *t* test was used to determine statistical differences in postscores from pretest scores. Reliability was measured using Pearson's *r*.

Project Evaluation Plan

Evaluation focuses on how to improve a project or program by effective assessment (Ho et al., 2009) and making a value judgment about available information (Frye & Hemmer, 2011). Evaluation is an essential tool used to adjust organizational goals, objectives, and priorities (Ho et al., 2009). Program evaluation is necessary to determine program impact, areas for improvement, and to develop best practices (Taylor & Nies, 2013).

The goal of the evaluation plan was to examine the impact of the geriatric education intervention on increasing nursing knowledge, satisfaction, and retention rates. The objective of the evaluation plan was to measure participant geriatric knowledge, job satisfaction, and retention rates in order to assess program effectiveness and impact by reviewing pre-test and post-test scores.

A total of *n*=57 nurses from a convenience sample at a LTC facility in LaPlata, Maryland met the eligibility criteria. Nurses who agreed to participate from Day 1 to 6 received the geriatric population education program as an hour-long presentation each week for a total of 6 weeks. Data from nurses who attended fewer than 6 sessions were discarded. Project implementation began September 14, 2016 and ended October 19, 2016. Data collection occurred during the pretest and posttest stages. Variable data collected included pre-intervention baseline and post-intervention survey responses regarding nursing geriatric knowledge, job satisfaction, retention, and demographic information which were used to evaluate the impact of the program. Demographic data collected included: gender, level of education, age, and tenure at organization. All data were reviewed, analyzed, quantified, and documented. To compare the outcome difference between the two groups, *t*-test analysis was used to show statistical significance. Results were disseminated to key stakeholders including participating nurses, managers, and organizational leaders.

Summary

To ensure patient safety in the LTC setting, older adults require care from nurses with specialized geriatric training and an understanding for the needs of elderly patients. Improving nursing geriatric knowledge, job satisfaction, and retention is a priority, especially in the LTC setting where the majority of the residents are frail and vulnerable. Multiple strategies have been

used to resolve the issues with no consensus on the best method. Nurses who attend the program may benefit from the added geriatric knowledge, which could help improve their decision making and clinical skills. Given current nursing shortages, increasing resident acuity, and consumer demand for high quality LTC, it is essential that the LTC sector consider a range of education, recruitment, and retention strategies (Venturato & Lewis, 2010). In this way, residential-aged care facilities may maximize the impact of their nurses on the delivery of care to older people (Venturato & Lewis, 2010).

I explored issues that impact nursing geriatric knowledge, job satisfaction, and retention at a LTC facility and evaluated the effectiveness of a continuing education program. A high percentage of nursing personnel had been employed at the organization 1 year or less, which suggested a possible retention problem. The results of the study aided in understanding the factors that impact nursing geriatric knowledge, satisfaction, and retention and highlighted the benefit of using continuing education as a strategy to increase professional growth and development, which has proven to be an effective method of improving knowledge, job satisfaction, and retaining nurses. The results of the outcome evaluation were shared with key stakeholders, including organizational leaders and participating nurses, and a suggestion was made to include the program as part of newly hired nurse orientation, nursing annual competencies, nurse residency program, and new employee orientation. Program results, discussion of findings, evaluation, recommendations, and analysis of self will be evaluated in the next section.

Section 4: Discussion and Implications

Introduction

The older adult population, the most rapidly growing segment of the U.S. population, is expected to continue to expand over the next decades (Barba, Hu, & Efird, 2011). As a result of the increase in longevity, older adults are developing more complex health problems and are requiring health care from nurses with specialized geriatric training. In order to get a better understanding of the issues that compromise patient safety in LTC settings and identify the best strategies to resolve them, a needs assessment was conducted. In a review of the literature, I confirmed a gap in nursing geriatric knowledge, job satisfaction, and staff retention as priority issues that impact quality care and threaten patient safety. The purpose of the project was to develop, implement, and evaluate a nursing continuing education program. A 6-week geriatric education program aimed at improving nursing knowledge, job satisfaction, and retention was designed and developed (see Table 1). A pre-test and post-test approach (see Appendix B) was used to capture the impact of the program and answer the practice-focused question: What impact will attendance have on improving nursing geriatric knowledge, job satisfaction, and staff retention by project completion?

Table 1

Geriatric Nursing Education Program

Week	*Topic*	*Description*
1	Basic Geriatrics for LTC Nurses	Introduction to characteristics of aging.
2	Pharmacology and Aging	Managing medication use in the elderly.
3	Physiological Changes of Aging	Implications of aging on healthcare.
4	Geriatric Symptom Evaluation	Differentiate age-related changes vs. illness.
5	Dementia Care	Dementia management strategies.
6	Geriatric Physical Assessment	Improving physical assessment skills.

Results/Summary of Findings

Ten nurses met the study criteria and were invited to participate. 2 nurses dropped out prior to completing the program, resulting in a total of 8 participants (n=8). In analysis of the demographic data, I revealed that the majority of participants were female (87.5%) ranging in age from 18-64 years. Most participants were in the 26-49 years age range (62.5%); no participant was younger than 18 years or older than 64 years. Participants consisted of a mix of RN's and LPN's, with the majority having an RN level of education (62.5%). No participant held higher than an associate degree. Length of employment ranged from less than 1 year to more than 20 years. The number of participants employed 1 to 5 years (37.5%) tied with the number of participants employed 5 to 10 years (37.5%). No participant had been employed at the organization more than 10 years. With the exception of gender which was coded as nominal data, all other demographic characteristics were coded as ordinal data for analysis in IBM SPSS. There were no missing data. Demographic characteristics information is summarized in Table 2.

Although not a study variable, I did note that the majority of participants (75%) were Caucasian, which was an unanticipated project outcome.

Table 2

Demographic Characteristics

	N=8 (%)
Gender	
Male (1)	1 (12.5)
Female (2)	7 (87.5)
Age range	
18-25 (1)	1 (12.5)
26-49 (2)	5 (62.5)
50-64 (3)	2 (25.0)
>65 (4)	0
Level of education	
High school/Diploma (1)	0
LPN (2)	3 (37.5)
RN Associate's (3)	5 (62.5)
RN Bachelor's (4)	0
Tenure at organization	
Less than 1 year (1)	2 (25.0)
1-5 years (2)	3 (37.5)
6-10 years (3)	3 (37.5)
15-20 years (4)	0
>20 years (5)	0

To measure the dependent variables, participants were asked to rate the degree to which they agreed with statements regarding: geriatric knowledge, job satisfaction, and intent to stay at the pre-test and post-test stages. The responses were based on a Likert-type scale in which the scores measured the level of knowledge, job satisfaction, and intent to stay, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) with higher scores indicating greater knowledge, satisfaction, and intent to stay. All responses were coded as scale data for analysis in IBM SPSS. For group comparison purposes, mean scores were calculated (see Table 3). Participants were divided into groups of RN's and LPN's. There were no missing data. Study variable information is summarized in Table 4.

Table 3

Program Mean/Standard Deviation Pre-test and Post-test Comparison Group Scores

Measure	Pretest M*/SD*	Posttest *M/SD*
Geriatric Knowledge		
LPNs (n=3)	3.67/.577	4.67/.577
RNs (n=5)	3.80/.447	4.00/.707
Job Satisfaction		
LPNs (n=3)	4.67/.577	4.67/.577
RNs (n=5)	3.80/.837	3.80/.837
Intent to Stay		
LPNs (n=3)	4.67/.577	4.67/.577
RNs (n=5)	3.80/.837	3.60/.548

Note. N=8

Table 4

Geriatric Program Variable Pretest and Posttest Scores

Measure	Pretest *M/SD*	Posttest *M/SD*	t	*p*
Geriatric Knowledge	3.75/.463	4.25/.707	(7)=2.65	.033
Job Satisfaction	4.13/.835	4.13/.835	--------	-------
Intent to Stay	4.13/.835	4.00/.756	(7)=1.00	.351

Note. Sig p<.05

Geriatric Knowledge

Evaluation of pretest and posttest knowledge survey results revealed an increase in mean scores following the education program. Between the two groups of nurses, a higher increase in knowledge was noted in the LPN's. A paired *t* test was conducted to evaluate whether statistical differences existed between mean knowledge scores before and after the geriatric program and to evaluate the null hypothesis that there would be no significant change in nurses' knowledge scores following participation in the geriatric program. The result of the paired *t* test was significant, $t(7) = 2.65$, $p < .05$ indicating there was a significant increase in posttest knowledge scores following the program. The mean increase was .50 with a 95% confidence interval. Therefore, I rejected the null hypothesis. Assumption testing indicated no gross violations. Paired *t* test information is summarized in Table 4. Pearson's correlation was used to measure the degree of linear relationship between two variables (see Table 5). Results revealed no significant correlation between the variables posttest knowledge and level of education ($r = -.49$, $p = .22$) or posttest knowledge and tenure ($r = .42$, $p = .30$). However, results revealed a significant correlation between the variables post-test knowledge and age range ($r = -.71$, $p = .05$). Correlation information is summarized in Table 6.

Job Satisfaction

In evaluating pre-test and post-test job satisfaction survey results, I revealed that mean scores remained the same following the education program in both groups of nurses. Because the pre-test and post-test scores remained the same, the *t* test could not be computed because the standard error of the difference was 0. I accepted the null hypothesis that there would be no difference in post-test scores from pre-test scores following participation in the education program. Pearson's *r* was conducted to measure the degree of linear relationship between two variables. Results revealed no significant correlation between the variables, job satisfaction, and level of education (r= -.54, p = .17), job satisfaction and tenure (r= .59, p = .12), or job satisfaction and age range (r= -.30, p = .47).

Intent to Stay

Evaluation of pre-test and post-test intent to stay results revealed a slight decrease in mean scores following the education program. Although intent to stay remained the same on pre-test and post-test scores in the LPN group, a decrease was noted in RN post-test scores. A paired *t* test was conducted to determine if there was a significant change in nurses' intent to stay scores following participation in the geriatric program and to evaluate the null hypothesis that there would be no significant change in intent to stay scores following the program. The result was not significant, t (7) = 1.00, p > .05: therefore, I accepted the null hypothesis. Pearson's *r* was conducted to measure the degree of linear relationship between two variables. Results revealed no significant correlation between the variables intent to stay and age range (r= .00, p = 1.00). However, results revealed a significant correlation between the variables intent to stay and level of education (r= -.73, p = .04) and intent to stay and tenure (r= .91, p = .00). See Table 6 for correlation information.

Table 5

Pearson's Correlation Information

Measure	*r*	*p*
Posttest knowledge/Age range	-.71	.05
Posttest knowledge/Level of education	-.49	.22
Posttest knowledge/ Length of employment	.42	.30
Job satisfaction/Age range	-.30	.47
Job satisfaction/Level of education	-.54	.17
Job satisfaction/Length of employment	.59	.12
Intent to stay/Age range	1.0	.00
Intent to stay/Level of education	-.73	.04
Intent to stay/Length of employment	.91	.00

Note. Sig $p<.05$

Discussion of Findings

This project was undertaken in order to get a better understanding of the issues that impact safe patient care in the LTC setting. A review of literature and needs assessment revealed that a lack of nursing geriatric knowledge, job satisfaction, and staff retention were the most pressing issues at this LTC facility. The goal of the project was to improve nursing knowledge, job satisfaction, and staff retention rates by providing participating nurses with a geriatric education program. Although the total number of participants was small (n=8), information was gained from their responses.

Knowledge translation (KT) is the most appropriate framework aligned with this educational program's goal of improving nursing knowledge. KT has been defined as the synthesis, dissemination, exchange, and ethically sound application of knowledge to improve health (Fredericks, Martorella, & Catallo, 2015). Using KT activities aids in the adoption of

evidence into practice to address current health care challenges, such as alleviating the risk for adverse events (Fredericks et al., 2015). The evidence-based education program was intended to increase nursing knowledge, thereby improving patient outcomes by eliminating or reducing risk of adverse events.

The need to improve geriatric knowledge of health care professionals has been established in literature (Rosswurm et al, 2003). Researchers have positively linked lack of nursing geriatric knowledge to poor patient outcomes and have shown that although nurses are the primary providers for vulnerable older adults, they are generally not well prepared in geriatric care (Donahue et al., 2011). In response to the rapid growth rate of the nation's elder population and to an increasing need to augment knowledge base of nurses who care for older persons, the Association for Gerontology in Higher Education and the National League for nursing have recommended the creation of geriatric competencies for undergraduate and graduate education (as cited in Towner, 2006).

Results revealed a significant increase in nursing geriatric knowledge following the education program, which demonstrates that this continuing education strategy was successful at improving nursing knowledge. The results are consistent with a study by Xiao, Shen, Wu, and Zhu (2012) examining an education program aimed at developing RNs' understanding of the complex care needs of older people. Xiao et al. noted a significant increase in geriatric knowledge following the program.

The geriatric education program was projected to improve participant job satisfaction rates. I found that nursing satisfaction remained the same at both the pretest and posttest levels as well as in the RN and LPN groups. Researchers have shown many predictors to nurse job satisfaction, including work environment, support from leaders, and opportunities for

professional growth. Lange et al. (2009) examined nurse satisfaction and patient fall rates following an acute care geriatric educational program, Lange et al. concluded that educational programs are a vehicle for increasing confidence with decision making, autonomy, and work satisfaction. Job satisfaction scores remaining the same in this scholarly project may indicate that nurses at this organization generally feel confident about their abilities, are content in their work environment, or have positive relationships with colleagues, all of which are predictors of work satisfaction (Lange, et al., 2009).

The program was also designed to increase nurses' intent to stay at the organization. I found a slight decrease in intent to stay scores in the RN group following the program but scores remained the same in the LPN group. The RN's were less likely than LPN's to stay at the organization following the geriatric education program. Several investigators who examine work circumstances that influence the intention of licensed nursing staff to remain employed in LTC identified: perceived empowerment, emotional exhaustion, benefits, travel time, level of job commitment, and work stressors as relevant factors (McGilton, Boscart, Brown, & Bowers, 2014). The decrease in intent to stay following the scholarly program may be attributed to participating nurses citing any of the above reasons for not wanting to remain employed at this organization.

Although not a study variable, the majority of participants were Caucasian (75%, *n*=6), and no African American (25%, *n*=2) participant held more than an LPN degree. This finding is consistent with a study by Kovner, Brewer, Katigbak, Kjukic, and Fatehi's (2012) on factors that predict nurses attaining higher education. The goal of the study by Kovner et al. was to identify factors predicting completion of additional degrees among nurses with associate degrees. Kovner et al. concluded that encouraging nurses toward higher education requires effort from

policy makers, employers, and educators to alleviate barriers such as race, to continuing education.

Evaluation of the Geriatric Program

After the program, participants were asked to complete an evaluation form consisting of ten questions. The first 5 questions (1-5) used a Likert-type scale to illicit responses regarding the degree to which participants agreed with statements about the program. The last five questions (6-10) used an essay format in order to allow individual participants' to share opinions about the program and the presenter (see Appendix D for program evaluation results).

For question 1, all participants (*n*=8) selected "*strongly agree"* that the objectives were clearly defined. For question 2, the majority of participants (*n*=7) selected "*strongly agree"* that the topics were relevant to them, while (*n*=1) participant selected "*agree".* Question 3 asked if the training would be useful in day-to-day practice, (*n*=5) participants selected "*strongly agree"* while the other (*n*=3) selected "*agree".* For question 4, (*n*=3) participants selected "*strongly agree"* that the presenter was knowledgeable about the topics, while the other (*n*=5) selected "*agree".* Question 5 asked if the allotted time was sufficient, (*n*=6) participants selected "*strongly agree"* while (*n*=2) selected "*agree".* I stopped reviewing here. Please go through the rest of your section and look for the patterns I pointed out to you. I will now look at Section 5.

Question 6 asked participants what they liked most about the program, (*n*=5) indicated "*the small group size*" while (*n*=3) indicated "*being able to collaborate and discuss the topics*". Question 7 asked participants what they liked least about the program, (*n*=5) noted there was "*nothing*" they did not like about the program, while (*n*=3) noted "*the time of day/too early*". Question 8 asked participants how the training would change their practice, (*n*=4) noted "*enhanced their knowledge*", (*n*=3) noted "*improve assessment skills*", and (*n*=1) noted "*more*

aware of ways to interact with patients". Question 9 asked participants what additional training they would like in future sessions, (*n*=2) did not respond, (*n*=1) indicated "*more training on geriatric medications*", (*n*=1) indicated "*more training on regulatory issues*", (n=1) indicated "*more case studies*", (*n*=1) indicated "*more training on* d*ementia*", (*n*=1) indicated "*more training on managing emergencies in the LTC setting*", and (*n*=1) indicated "*any geriatric education available*". The tenth and final question, asked participants to share additional comments, (*n*=5) thanked the presenter and noted "*the materials improved their geriatric knowledge*", (*n*=2) thanked the presenter, (*n*=1) indicated "*liked the format, length, and amount of information presented in the modules*".

Recommendations to Stakeholders

To address the gap in nursing geriatric knowledge informed by program findings and support the organization's effort to improve patient care outcomes, a 6-week geriatric nursing education program was developed. The modules covered relevant geriatric information designed to assist participating nurses in understanding the needs of the older adult population they serve. Post-test results revealed a significant increase in nursing geriatric knowledge following attendance in the program. To highlight the impact of the program, pre-test and post-test results and participant feedback was shared with stakeholders. To help close the gap in geriatric knowledge identified by organizational nurses, I recommended that the education program be included in newly hired nurse orientation and annual nursing competencies. To promote program sustainability, I recommended the modules be updated periodically with current evidence-based information. To evaluate improvements in patient health outcomes, I recommended the nurse educator or designated person conduct monthly patient chart reviews for a period of six months. I also recommended all findings be presented to stakeholders.

Implications

Impact on practice and/or action

Researchers have identified multiple barriers to health care of older adults in the LTC setting. A review of literature and needs assessment confirmed that lack of geriatric knowledge, job satisfaction, and retention are major issues that impact patient safety and health outcomes. The global increase in life expectancy has created a need for a more knowledgeable nursing workforce for the delivery of health care services to geriatric patients. However, many nurses in the LTC setting have limited training due in part to the lack of geriatric content in nursing curricula. The IOM (2008) stressed the need for educational programs to prepare nurses to provide high quality and safe health care to older patients. Because a rapidly evolving health care environment demands sound research evidence to inform clinical practice and improve patient outcomes (Hain & Haras, 2015), an evidence based geriatric education program was developed to increase nursing understanding of the older adult patients they serve. Program results revealed a significant increase in geriatric knowledge following participation in the education strategy. The acquisition of new knowledge may indicate that participants are also keeping up-to-date clinically and professionally (Schostak, et al., 2010) which has implications for standards of practice in the LTC setting. For participating nurses, the implications resulting from the program finding of increased geriatric knowledge are improved confidence, decision making, and clinical skills. For the patients, the implications are potential decreased incidences of adverse events, hospitalization, and costs. For the institution, the implications include increased patient satisfaction scores and decreased costs.

Impact for future research

Future research focuses on sharing data to foster a more collaborative environment, to answer questions in a shorter time frame, to reduce duplication efforts, and to improve efficiency (Green et al., 2015). The findings of the scholarly project have implications for current and future nurses caring for geriatric patients. Current nurses may benefit from the increase in geriatric knowledge that could affect the way they care for older patients. This understanding of older adults could change the standard of geriatric practice for future nurses.

The geriatric education program was designed to address the gap in geriatric knowledge identified through literature review and statements by individual nurses. Program results revealed a significant increase in nursing geriatric knowledge following participation in the program, which answered the question regarding the impact of the program. However, job satisfaction scores remained the same and intent to stay scores decreased slightly following the program which may indicate that this education strategy may not be the best method to address those issues. Future research should focus on using different design methodologies to address job satisfaction and retention issues.

This study could be replicated on a larger scale in future research and include nurses in all age groups, gender, and education levels. Since I noted low attendance by African American nurses, participants from diverse backgrounds should be encouraged to attend in order to examine factors such as race and culture, on attendance in continuing education programs.

Impact on social change

With the projected increase in number of Baby Boomers in the next decades, it is likely that the services of geriatric nurses will be in great demand. Researchers have shown that nurses

play an integral role in providing care to older adults with complex healthcare issues. Bradbury-Jones and Taylor (2014), noted that social impact involves analyzing, monitoring, and managing the intended and unintended, positive and negative, social consequences of development. It is concerned with changes to people's way of life, their culture, community, environment, and health and well being. The social impact of this scholarly education program will be seen in the improved geriatric knowledge, confidence, and culture of the nurses' who participated in the program and felt in the improved health and well being of the older patients who will benefit from the nurses' emerging knowledge. Additionally, through early identification of potential health problems, patient care outcomes may improve significantly evident by increased survival rates, fewer complications, and decreased medication side effects. Patient satisfaction scores and family trust may also improve which could have a financial impact on the organization.

Scholarly Project Strengths and Limitations

There were many strengths and limitations to this scholarly project. A major strength is that the project provided valuable information on issues that impact the delivery of safe care to older patients in the LTC setting. Additionally, results revealed a significant increase in nursing geriatric knowledge following program attendance, which reinforced the value of using educational strategies to resolve the issue of nursing knowledge. Also, participants overwhelmingly stated that the education program improved their geriatric knowledge which equates to success at achieving that goal. Lastly, the pre-test and post-test design method was successful at measuring program outcomes.

The scholarly project was not without limitations. Major limitations included the small sample size (n=8) and lack of diversity in participants which affected the generalization of program results. Another limitation was the 6-week time frame which may have been too short

to evaluate the true outcomes of the program. The final limitation was the LTC setting, where the program was implemented, which affects the generalization of the results to other settings such as hospitals.

Recommendations for Remediation of Limitations in Future Work

First, to correct the limitation concerning the small sample size, I would work more closely with leaders to address scheduling conflicts which could increase the total number of participants. I would also create a learning module with the same content from the programthat would be accessible to all nurses regardless of what shift they work on. Next, to correct the limitations concerning diversity and setting, I would encourage attendance of participants from diverse ethnic backgrounds and replicate the study in a different setting in future research. Then, to correct the limitation concerning the short time frame, I would implement the education program over a longer timeframe; I would also reassess geriatric knowledge 6 months following the program to evaluate long term program outcomes. Finally, to correct the limitations concerning job satisfaction and intent to stay scores, I would investigate other strategies that have been used to address those issues in similar settings.

Section 5: Scholarly Product

Future Dissemination

Clinical practice is slow to change, and gaps exist between what is known to be best practice and actual daily practice (Hansen & Severisson, 2009). Under-use of well-documented standards and care principles pose risks to patient safety; furthermore, health care providers are morally, legally, and professionally bound to seek and employ the best available evidence in their practice (Hansen & Severisson, 2009). Effective research dissemination, implementation, communication, and collaboration are essential for the delivery of high quality care (Hansen & Severisson, 2009). The results of this evidence-based scholarly project were disseminated to key stakeholders to highlight the changes in practice needed to ensure safe patient care at this organization.

Disseminating research findings and project outcomes to evaluate the effectiveness of nursing interventions are essential to build the knowledge base of nursing, provide new evidence for practice, and develop studies that build on one another (Oermann & Hays, 2011). Findings can be disseminated in multiple ways, including publishing and poster presentations. I intend to submit my manuscript for publication. Through publication, nurses can describe best practices; innovations developed for patients, staff, and students; and new techniques they are using in clinical practice, teaching, management, and administration (Oermann & Hays, 2011).

Analysis of Self

As Scholar

Scholarship is a facet of the nursing profession and continues to evolve as nurses strive to improve patient care through research and EBP (Conrad & Pape, 2014). Nursing scholars must stay current with developments in their field, create new knowledge, and inspire future scholars

(Conrad & Pape, 2014). Scholars play a role in advancing nursing research by focusing on solving problems, sharing knowledge, and disseminating findings (Johnstone, 2012). This scholarly project has expanded my knowledge of nursing research by challenging me through the development and implementation of an evidence-based nursing education program. The project was focused on solving problems identified through a needs assessment conducted at a LTC facility aimed at empowering nurses with evidence-based geriatric knowledge to provide safe care to the older adult patients they serve. Results were disseminated to key stakeholders to highlight program outcomes. As a DNP student at Walden University, I have been taught to use an evidence-based approach as the foundation for guiding social change and improving patient care. This was the first project of this magnitude that I conducted alone, and I am proud that participants reported an increase in geriatric knowledge and indicated the information gained from the program would improve their day-to-day practice.

As Practitioner

A nurse practitioner is an RN who has acquired the expert knowledge base, complex decision-making skills, and clinical competencies for expanded practice (Koskinen et al., 2012). Advanced practice nursing combines the roles of mentor, educator, researcher, and administrator (Koskinen et al., 2012). As a nurse practitioner and member of the health care team, my responsibilities include diagnosing health problems, managing illness and complications, and providing evidence-based education to patients. This scholarly project reinforced the importance of patient education and highlighted the importance of educating other members of the health care team. Due to advancements in technology, patients have more access than ever to medical information; some of which is evidence-based and some not. Health care providers have an

obligation to stay current on best practice strategies to help patients sort through information in their quest to achieve better health outcomes.

As Project Developer

According to Ramos, Friere, Rocha Batista, and Martinez (2014), a project works like a plan, presented to meet a proposed target, and using resources in order to create a result. Ramos et al. stated that projects are change makers in health care, as they provide the possibility of turning goals and strategies into real results. During the development of this evidence-based project, I learned many lessons, including the importance of proper planning. Program planning refers to the activities that occur prior to the implementation of a program (Flower, Gaucher, & Bourque, 2014). The process of developing a scholarly project was challenging. I learned how to manage time more efficiently, to remain flexible, and the art of compromise. As I reflect on the project, I am most pleased that the nursing staff trusted me to implement a program on topics that they felt passionate about. Program results indicated that the project was successful at increasing geriatric knowledge, which the nurses can use to translate evidence into real-world practice and improve patient health outcomes.

What This Project Means for Future Professional Development

During the development of this scholarly project, my level of interest in geriatric care grew significantly. The project helped me to have a better appreciation for the demands an increase in older population would place on the nurses who provide care to these individuals. This understanding helped to center the project on developing a quality and sustainable program that would be meaningful to the nursing staff for years to come. Following the implementation of the project, I received positive feedback from participants who confirmed that my work was useful. Program attendees expressed that their participation in the program resulted in increased

geriatric knowledge, which should strengthen their clinical, assessment, and decision-making skills as well as to improve their day-to-day practice and patient outcomes. I am interested in continuing to expand on this research in the future.

Summary

For people in the U.S., discoveries in the health sciences have extended life span (Grady, 2014). In addition, advances in modern medicine and technology have led to people around the world living longer than ever before. This increase in life expectancy means that the services of geriatric nurses will be in high demand. Nurses are the primary care providers for vulnerable older adults, and they are generally not well prepared in geriatric care (Donahue et al., 2011). The need to continue to remain current in a profession that is changing and developing, along with the mandated requirements of nurses to participate in continuing professional development to maintain their registration, has resulted in nurses seeking a variety of opportunities to enhance nursing knowledge (Curtis, Wiseman, Kennedy, Kourouche, & Goldsmith, 2015). A geriatric education program was designed and developed aimed at improving nursing knowledge, job satisfaction, and retention at a LTC organization. Program findings indicated that the continuing education program was successful at increasing nursing geriatric knowledge. However, findings revealed that job satisfaction remained the same and intent to stay decreased slightly. To prepare for the influx of Baby Boomers, nurses need to be proactive in improving their geriatric knowledge in order to provide the best evidence-based care to vulnerable older patients. This educational program is a starting point in obtaining that knowledge which could help improve overall patient health outcomes.

Manuscript

Improving Nursing Knowledge, Satisfaction, and Retention in Long Term Care

Ghislaine Barry, MS, BSN, WHNP-BC

Abstract

Through the development of new technology and advancements in modern medicine, people around the world are living longer. This increase in life expectancy has created a need for a more qualified and knowledgeable nursing workforce for the delivery of geriatric health care. Although nurses are the primary caregivers for vulnerable older adults, they are generally not well prepared or trained in geriatric care. The objectives of the project were to (a). examine existing literature, (b). design and develop a nursing continuing education program aimed at improving nursing geriatric knowledge, job satisfaction, and retention rates, (c). implement the education program, and (d). evaluate the effectiveness of the program. Guided by the ARCC model for EBP implementation, a needs assessment was conducted followed by the implementation of a 6-week geriatric nursing education program at a long term care (LTC) organization. A quasi experimental pre-test and post-test design method was used to evaluate the effectiveness of the program. Program results revealed a significant increase in nursing knowledge on post- test scores. However, job satisfaction remained the same and intent to stay decreased slightly. The implications for social change of the project include: increased nursing confidence, strengthened decision making and clinical skills, and improved patient outcomes based on newly acquired knowledge. Future research could focus on replicating the study on a larger scale, to include measuring participant race since I noted a lack of diversity in study participants.

Introduction

Due to changes in lifestyle and medical advances, human beings worldwide are living longer. In fact, humans are expected to live an average of 18 years longer than they did 100 years ago (Wallace, Greiner, Grossman, Lange, & Lippman, 2006). In the U.S., the geriatric population, defined as people 65 year of age and older, is expected to experience growth during the next four decades (Oster & Oster, 2015). Per the U.S. Census Bureau (2014), the 2015 projected life expectancy was 78.9 years compared to 70.8 years in 1970. This increase in older population has major implications for U.S. healthcare systems and the services of nurses.

The increase in geriatric population has created a need for a more qualified and knowledgeable nursing workforce for the delivery of health care services to older patients. Although older adults are healthier than they have been in the past, they have both acute and chronic medical conditions that require more extensive nursing care (Wallace et al., 2006). Because of their advanced age, many older adults experience the effects of chronic diseases and are developing more complicated health problems (Cook, Dover, Dickson, & Engh, 2010). These problems are compounded by the natural physiological changes of aging that predispose elderly patients to a variety of health related issues. The complexities of these health problems necessitate a better prepared nursing workforce (Cook et al., 2010) with an understanding for the needs of older adults.

Many issues in LTC affect the quality and delivery of safe nursing care to geriatric patients, including high percentage of LPNs with limited experiential knowledge, lack of basic geriatric knowledge by RNs, job dissatisfaction, and poor staff retention. For the purpose of this study, these issues were further explored.

Lack of nursing geriatric knowledge in LTC can lead to many negative patient outcomes and is influenced by many factors, including level of education, length of employment, amount of training, access to continuing education, organizational resources, and number of years in practice. Skillful nursing care has been shown to contribute to higher quality of life for older patients and evidence strongly indicates that patient outcomes improve when older adults receive care from nurses with geriatric training (Wendel, Durso, Cayea, Arbaje, & Tanner, 2010). Yet, many nurses have limited exposure to education in gerontology or were not well prepared in geriatric care (Donahue, Kazer, Smith, & Fitzpatrick, 2011).

The key report from the Institute of Medicine (IOM, 2008), includes recommendations for addressing the geriatric education needs of nurses and other clinicians to improve the overall care of older adults. The report states that healthcare workers receive very little geriatric training and are not prepared to deliver the best possible care to older patients and concluded that the healthcare workforce needs enhancement in education and training to handle the needs of a new generation of older adults.

Workforce turnover is usually defined as the rate at which an organization gains and loses employees; it may also be determined in terms of how long employees stay in their employment position (Currie & Hill, 2012). Worldwide, average nursing turnover rates range from 10-21% annually, with the U.S. reporting rates greater than 20% (Cowden & Cummings, 2012). This figure is considered to be in the high range which falls between 20-44 % (Li & Jones, 2013). In 2010, the American Nurses Association (ANA) reported that a whopping 53% of nurses were considering leaving their current position. In a private sector survey conducted in the U.S., the national average turnover rate was estimated to be approximately 14% for bedside RNs, and almost 28% for RNs in their first year of employment (Li & Jones, 2013).

Researchers have positively linked lack of job satisfaction to organizational retention issues. In fact, many studies reveal a strong relationship between low job satisfaction and high nursing turnover with some showing a correlation between job dissatisfaction with intent to leave the nursing profession altogether (Palmer, 2014). A study by Duffied, Roche, O-Brien-Pallas, Catling-Paull, and King (2009) evaluated factors impacting nurse job satisfaction and intent to leave and found that nurses who were intending to remain in their job were more likely to be satisfied, be older, and have dependents.

The model that guided this scholarly project was the advancing research and clinical practice through close collaboration (ARCC). The ARCC model focuses on EBP implementation and promotes sustainability at a system wide level (Schaffer, Sandau, & Deidrick, 2012). This model served as a roadmap during the implementation of the evidence-based project. The objectives of the scholarly project were to (a). examine and analyze existing literature on nursing geriatric knowledge, job satisfaction, and retention, (b). design and develop a continuing education program to address gaps in practice and improve performance, (c). implement the 6-week education program, and (d). evaluate the effectiveness of the program by comparing knowledge, job satisfaction, and retention rates of participating nurses before and after the program.

Methodology

A quasi experimental pre-test and post-test design was used to measure the effectiveness of the 6- week hour long geriatric education program by comparing nursing knowledge, job satisfaction, and retention rates of participating nurses before and after the program. The study was conducted at a nonprofit nursing and rehabilitation LTC facility in LaPlata, Maryland. The convenience sample included a mix of RNs and LPNs (n=57) employed full and part time.

Details of the program were explained to nurses either in person or in writing and questions answered prior to project implementation.

After Walden University IRB approval, all nurses currently employed at the organization were invited and recruited to participate in the program. No incentives were offered for participation. To maintain ethical protection and adhere to ethical considerations, written informed consent was obtained from all project participants. Participation was fully voluntary and participants were allowed to withdraw from the program at any time. Results were presented anonymously.

A 7-item pre-test and post-test survey was developed with questions pertaining to nursing geriatric knowledge, job satisfaction, intent to stay, and demographic information including: gender, age, level of education, and tenure at the organization. I created the survey questions in a way to generate measurable responses. Survey responses were used to measure outcome data. Informed consents, letter of invitation, and pre-test surveys were placed in individual mail slots of eligible nurses with instructions. The concepts being measured included: geriatric knowledge, job satisfaction, and intent to stay. The constructs being measured included: the people (RNs or LPNs) and the event (the program). All demographic and variable responses were evaluated and converted to numerical data for analysis using IBM SPSS version 21. Pre-test and post-test nursing knowledge, retention, and job satisfaction were measured using a 5 point Likert-type scale to quantify the information. Participants selected from a number of options including: 5=*strongly agree*, 4=*slightly agree*, 3=*neither agree nor disagree*, 2= *slightly disagree*, 1=*strongly disagree*. With higher scores indicating higher levels of knowledge, intent to stay, and job satisfaction.

The educational program: content for the Power Point modules were generated by extracting relevant geriatric information from peer-reviewed journals and articles. Each module covered different geriatric topics, including basic geriatrics for LTC Nurses, pharmacology and aging, physiological changes of aging, geriatric symptom evaluation, geriatric physical assessment, and care of the older adult with dementia. To encourage interactive dialogue and engage audience participation, at the end of each presentation, actual case studies identified through chart review were analyzed by participants pertaining to the topic of the day.

Results

Ten nurses met the study criteria and were invited to participate. 2 nurses dropped out prior to completing the program, resulting in a total of eight participants (*n*=8). Analysis of the demographic data revealed that the majority of participants were female (87.5%) ranging in age from 18-64 years. Most participants were in the 26-49 years age range (62.5%), no participant was younger than 18 years or older than 64 years. Participants consisted of a mix of RN's and LPN's, with the majority having an RN level of education (62.5%). No participant held more than an associate's degree. Length of employment ranged from less than 1 year to more than 20 years. The number of participants employed 1to 5 years (37.5%) tied with the number of participants employed 6 to 10 years (37.5%). No participant had been employed at the organization more than ten years.

Evaluation of pre-test and post-test knowledge survey results revealed an increase in mean scores following the education program. Between the two groups of nurses, a higher increase in knowledge was noted in the LPN's. A paired *t* test was conducted to evaluate whether statistical differences existed between mean knowledge scores before and after the geriatric program and to evaluate the null hypothesis that there would be no significant change in

nurses' knowledge scores following participation in the geriatric program. The result of the paired *t* test was significant; therefore, I rejected the null hypothesis.

Evaluation of pre-test and post-test job satisfaction survey results revealed that mean scores remained the same following the education program in both groups of nurses. Since the pre-test and post-test scores remained the same, the *t* test could not be computed because the standard error of the difference was zero. I accepted the null hypothesis.

Evaluation of pre-test and post-test intent to stay survey results revealed a slight decrease in mean scores following the education program. Although intent to stay remained the same on pre-test and post-test scores in the LPN group, a decrease in post-test scores was noted in the RN group. A paired *t* test was conducted to determine if there was a significant change in intent to stay scores following participation in the geriatric program and to evaluate the null hypothesis that there would be no significant change in intent to stay scores following the geriatric program. The result was not significant; therefore, I accepted the null hypothesis.

Discussion

This project was undertaken to gain a better understanding of the issues that impact safe patient care in the LTC setting. A review of literature and needs assessment revealed that lack of nursing geriatric knowledge, job satisfaction, and staff retention were the most pressing issues at this LTC facility. The goal of the project was to improve nursing knowledge, job satisfaction, and retention by providing participants with a geriatric education program.

The need to improve geriatric knowledge of health care professionals has been well established in literature (Rosswurm, M.E., Larrabee, J.H., & Nunley, B.L., 2003). Researchers have positively linked lack of nursing geriatric knowledge to poor patient outcomes and have

shown that although nurses are the primary providers for vulnerable older adults, they are generally not well prepared in geriatric care (Donahue et al., 2011). In response to the rapid growth of the nation's elder population and to an increasing need to augment knowledge base of nurses who care for older persons, the Association for Gerontology in Higher Education and the National League for Nursing have recommended the creation of geriatric competencies (cited in Towner, 2006).

Program results revealed a significant increase in nursing geriatric knowledge following the participation in the education program which indicates that this continuing education strategy was successful at achieving the goal of increasing knowledge. The results are consistent with a study by Xiao, Shen, Wu, and Zhu (2012) examining an education program aimed at developing registered nurses understanding of the complex care needs of older people. Xiao et al. noted a significant increase in geriatric knowledge following the nursing education program.

It was anticipated that the geriatric program would improve job satisfaction rates, however, results revealed that nursing satisfaction remained the same on both the pre-test and post-test scores in both groups of nurses. Researchers have shown many predictors to nurse job satisfaction, including work environment, support from leaders, and opportunities for professional growth. A study by Lange et al., (2009) examined nurse satisfaction and patient fall rates following an acute care geriatric educational program. Results revealed an increase in work satisfaction and Lange et al. concluded that educational programs are vehicles for increasing confidence with decision making, autonomy, and work satisfaction. Satisfaction scores remaining the same in this scholarly research project may indicate that nurses at this organization generally feel confident about their abilities, are content in their work environment, or have

positive relationships with colleagues, all of which are predictors of work satisfaction (Lange et al., 2009).

The education program was also projected to increase nurses' intent to remain employed at the organization. Study results revealed a slight decrease in intent to stay in the RN group following the program but remained the same in the LPN group. This result indicates that RN's were less likely than LPN's to stay at the organization following the geriatric program. Several investigators who examine work circumstances that influence the intention of licensed nursing staff to remain employed in LTC indentified: perceived empowerment, emotional exhaustion, benefits, travel time, level of job commitment, and work stressors as relevant factors (McGilton, Boscart, Brown, & Bowers, 2014). The decrease in intent to stay scores may be attributed to the participating nurses citing any of the above reasons for not wanting to remain employed at this organization.

Interestingly, although not a study variable, the majority of participants were Caucasian (75%, *n*=6) and no African American (25%, *n*=2) participant held more than an LPN degree. This finding is consistent with a study by Kovner, Brewer, Katigbak, Kjukic, and Fatehi (2012) examining factors that predict nurses' attaining higher education. The goal of the study was to identify factors predicting completion of additional degrees among nurses with Associate degrees. Kovner et al. concluded that encouraging nurses toward higher education requires effort from policy makers, employers, and educators to alleviate barriers such as race, to continuing education.

There were many limitations to this scholarly project. Major limitations included: the small sample size and lack of participant diversity which affected the generalization of program results, the 6-week time frame which may have been too short to evaluate the true outcomes of

the program, and the implementation of the program at a LTC facility which affects the generalization of the results to other settings such as hospitals.

Implications

Researchers have identified multiple barriers to quality care to older adults in the LTC setting. A review of literature and needs assessment confirmed that lack of geriatric knowledge, job satisfaction, and retention are major issues that considerably impact patient outcomes. The global increase in life expectancy has created a need for a more knowledgeable nursing workforce for the delivery of healthcare services to geriatric patients. Many strategies must be considered in an effort to improve nursing geriatric knowledge.

The IOM (2008) stressed the need for educational programs to prepare nurses to provide the highest quality and safest healthcare. Because a rapidly evolving health care environment demands sound research evidence to inform clinical practice and improve patient outcomes (Hain & Haras, 2015), an evidence based geriatric education program was developed and implemented to improve patient outcomes and increase nursing understanding of the special needs of the vulnerable older patients they serve. Results revealed a significant increase in geriatric knowledge following participation in the education program. The acquisition of new knowledge may indicate that participating nurses are also keeping up to date clinically and professionally (Schostak, et al., 2010) which has major implications for standard of practice in the LTC setting.

According to Bradbury-Jones and Taylor (2014), social impact involves analyzing, monitoring, and managing the intended and unintended, positive and negative, social consequences of development. It is concerned with changes to people's way of life, their culture,

community, environment, and health and well being. The social impact of this scholarly education program will be seen in the improved geriatric knowledge, confidence, and culture of the nurses' who participated in the program and felt in the health and well being of the older patients who will benefit from the nurses' emerging knowledge.

Conclusion

The extraordinary discoveries in the health sciences have extended life span in the U.S. (Grady, 2014). In addition, advances in modern medicine and technology have led to an increase in global life expectancy. This increase in longevity means that the services of geriatric nurses will be in high demand for the coming decades. Nurses are the primary care providers for vulnerable older adults and researchers have shown that they are generally not well prepared in geriatric care (Donahue et al., 2011). The need to continue to maintain current knowledge in a profession that is rapidly changing and developing, along with the mandated requirements of nurses to participate in continuing professional development to maintain their registration has resulted in nurses seeking a variety of opportunities to enhance nursing knowledge (Curtis, Wiseman, Kennedy, Kourouche, & Goldsmith, 2015). A geriatric education program was designed, developed, and implemented aimed at improving nursing knowledge, job satisfaction, and retention at a LTC organization. Findings revealed a significant increase in nursing knowledge following program participation, which was one of the project goals. In order to prepare for the influx of Baby Boomers, nurses need to be proactive in improving their geriatric knowledge in order to provide the best evidence-based care to the vulnerable older patients they serve. This educational program is a good starting point in obtaining that knowledge which could help improve clinical decision making skills as well as improve overall patient health outcomes.

References

American Nurses Association. (2010). Retrieved from http://nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals.html

Aiken, L. H., Clarke, S., Sloane, J.A., Sochalski, R., & Silber, J. H. (2002). Hospital nurse staffing and patient mortality, nurse burnout and job satisfaction. *Journal of the American Medical Association, 288*(16), 1987-1993. doi:10.1001/jama.288.16.1987

Aiken, L. H., Cimiotti, J. P., Sloane, D. M., Smith, H. L., Flynn, L., & Neff, D. F. (2011). Effects of nurse staffing and nurse education on patient deaths in hospitals with different nurse work environments. *MedCare, 49*(12),1047-1053. doi: 10.1097/MLR.0b013e3182330b6e

Barba, B. E., Hu, J., & Efird, J. (2011). Quality geriatric care as perceived by nurses in long term and acute care settings. *Journal of Clinical Nursing, 21,* 833-840. doi:10.1111/j.1365-2702.03781.x.EPub 2011 Sept 13.

Bortz, K. L. (2015). Creating a geriatric focused model of care in trauma with geriatric education. *Journal of Trauma Nursing, 22*(6), 301-305. doi:10.1097/JTN.0000000000000162

Bourbonniere, M., & Strumpf, N.E. (2008). Enhancing geriatric nursing competencies for RNs in nursing homes. *Research in Gerontological Nursing, 1*(3), 171-175. doi:10.3928/00220124-20091301-02

Bradbury-Jones, C., & Taylor, J. (2014). Applying social impact assessment to nursing research. *Nursing Standard, 28*(48), 45-49. doi:10.7748/ns.28.48.45.e8262

Buykx, P., Humphreys, J., Wakerman, J., & Pashen, D. (2010). Systematic review of effective retention incentives for health workers in rural and remote areas: Towards evidence based

policy. *Australian Journal of Rural Health, 18*, 102-109. doi:10.1111/j.1440-1584.2010.01139.x

Carthon, J. M., Nguyen, T. H., Chittams, J., Park, E., & Gueverra, J. (2011). Measuring success: Results from a national survey of recruitment and retention initiatives in the nursing workforce. *Nursing Outlook, 62*, 259-267. doi:10.1016/j.outlook.2014.04.0006.EPub 2014 Apr 26

Charles, L., Dobbs, B., Triscott, J., & McKay, R. (2014). Care of the elderly program at the University of Alberta: Meeting the challenges of treating the aging population. *Canadian Family Physician, 60,* e521-e526. http://www.cfpc.ca/CanadianFamily Physician

Conrad, P. L., & Pape, T. (2014). Roles and responsibilities of the nursing scholar. *Pediatric Nursing, 40*(2), 87-90. http://www.pediatricnursing.net/issues/14Marapr/abract3.html

Cook, L., Dover, C., Dickson, M., & Engh, B. (2010). Returning to school: The challenges of licensed practical nurse to registered nurse transition student. *Teaching and Learning in Nursing, 5*, 125-128. doi:10.1016/j.teln.2010.02.003

Corazzini, K. N., Anderson, R. A., Mueller, C., Thorpe, J. M., & McConnell, E. S. (2013). Licensed practical nurse scope of practice and quality of nursing home care. *Nursing Research, 62*(5), 315-324. doi:10.1097/NNR.0b013e31829ebaDD

Cowden, T. L., & Cummings, G. G. (2012). Nursing theory and concept development: A theoretical model of clinical nurses intentions to stay in their current positions. *Journal of Advanced Nursing, 68*(7), 1646-1657. doi:10.111/j.1365-2648.2011.05927.x

Currie, E. J., & Carr- Hill, R. A. (2012). What are the reasons for high turnover in nursing? A discussion of presumed causal factors and remedies. *International Journal of Nursing Studies, 49,* 1180-1189. doi:10.1016/j-iijnurstu.2012.01.001

Curtis, K., Wiseman, T., Kennedy, B., Lourouche, S., & Goldsmith, H. (2016). Implementation and evaluation of a ward based elearning program for trauma patient management. *Journal of Trauma Nursing, 23*(1), 28-36. doi:10.1097/JTN.0000000000000177 I stopped reviewing here. Please go through the rest of your references and look for the patterns I pointed out to you.

Donahue, M., Kazer, M.W., Smith, L., & Fitzpatrick, J.J. (2011). Effect of a geriatric nurse education program on the knowledge, attitudes, and certification of hospital nurses. *The Journal of Continuing Education, 42*(8), 360-364. doi:10.3928/00220124-2011045-03

Duff, B., Gardner, G., Osborne, S. (2014). An integrated educational model for continuing nurse education. *Nurse Education Today, 34*, 104-111. doi:10.1016/j.nedt.2012.11.022.EPub 2012 Dec 21

Duffield, C., Roche, M., & Merrick, E.T. (2006). Methods of measuring nursing workload in Australia. *Collegian, 13*(1), 16-22. http://www.collegianjournal.com/article/S1322-7696(08)60512-01/fulltext

Dunn, D.J. (2012). What keeps nurses in nursing? *International Journal of Human Caring, 16*(3), 34-41. http://www.internationaljournalfor humancaring.org

Flowers, L. Gaucher, C. & Bourque, J. (2014). Evaluating the planning and development phase of a demonstration project: At home/Chez soi Moncton. *Canadian Journal of Community Mental Health, 33*(4), 7-22. doi:10.7870/cjcmh-2014.027

Fredericks, S., Martorella, G., & Catallo, C. (2015). Using knowledge translation as a framework for the desing of a research protocol. *Journal of Nursing Interventions, 21*(2), 157-163. doi:10.1111/ijn.12338

Friedman, M.I., Delaney, M.M., Schmidt, K., Quinn, C., & Macyk, R. (2013). Specialized new graduate RN pediatric orientation: A strategy for nursing retention and its financial impact. *Nursing Economics, 31*(4), 162-170. http://wwwnursingeconomics.net/necfiles/subjectindex/2013_index_pdf

Frye, A.W. & Hemmer, P.A. (2012). Program evaluation models and related theories: AMEE guide no. 67. *Web Paper/AMEE Guide, 34*, 288-299. doi:10.3109/0142159x.2012.668637

Gao, F., Newcombe, P., Tilse, C., Wilson, J., & Tuckett, A. (2014). Models for predicting turnover of residential aged care nurses: A structural modeling analysis of secondary data. *International Journal of Nursing Studies, 51*, 1258-1270. doi:10.1016/j.ijnurstu.2014.01.011.EPub 2014 Jan 28

Grady, P.A. (2014). Charting future directions in nursing research: NINR's innovative questions initiative. *Journal of Nursing Scholarship, 46*(3), 143. doi: 10.1111/jnu.12078

Gray-Miceli, D., Wilson, L.D., Stanley, J., Watman, R., Shire, A., Sofaer, S., & Mezey, M. (2014). Improving the quality of geriatric nursing care: Enduring outcomes from the geriatric nursing education consortium. *Journal of Professional Nursing,30*(6), 447-455. doi:10.1016/j.profnurs.2014.05.001.EPub 2014 May 9

Green, A.K., Reeder-Hayes, K.E., Corty, R.W., Basch, E., Millowsky, M.I., Dusetzina, S.B., Bennett, A.V., & Wood, A. (2015). The project data sphere initiative. Accelerating cancer research by sharing data. *Oncologist, 20*(5), 464-e20. doi:10.1634/theoncologist.2014-0431.EPub 2015 Apr 15

Grove, S.K., Burns, N., & Gray, J.R. (2013). *The Practice of Nursing Research: Appraisal, Synthesis, and Generation of Evidence, 7th ed.* St. Louis, MO: Elsevier.

Grumbach, K., Ash, M., Seago, J.A., Spetz, J., & Coffman, J. (2001). Measuring shortages of hospital nurses: How do you know a hospital with a nursing shortage when you see one?*Medical Care Research & Review, 58*(4), 387-403. doi:10.117755870105800401

Hain, D. & Haras, M.S. (2015). Changing nephrology nurses' beliefs about the value of evidence based practice and their ability to implement in clinical practice. *Nephrology Nursing Journal, 42(6),* 563-566. http://www.annanurge.org

Hairr, D.C., Salisbury, H., Johannsson, M., & Redfern-Vance, N. (2014). Nurse staffing and the relationship to job satisfaction and retention. *Nursing Economics, 32*(3), 142-147. https://www.nursingeconomics.net

Hansen, B.S. & Severinsson, E. (2009). Dissemination of research based knowledge in an intensive care unit. *Intensive and Critical Care Nursing, 25,* 147-154. doi:10.1016/j.iccn.2009.02.005.EPub 2009 Apr 11

Harding, K., Potter, J., Horne-Thompson, P.L., Donley, E., & Taylor, N.F. (2014). Not enough time or low priority? Barriers to evidence based practice for allied health clinicians. *Journal Continuing Education Health Professionals, 34*(4), 224-231. doi:10.1002/chp.21255

Ho, W.W., Chen, W.J., Ho, C.K., Lee, M.B., Chen, C.C.,Hou, F.H.C. (2011). Evaluation of the suicide prevention program in Kaohsiung City, Taiwan, using the CIPP evaluation model. *Community Mental Health Journal, 47*, 542-550. doi: 10.1007/s10597-010-9364-7

Hunt, S.L., Probst, J.C., Haddock, K.S., Moran, R., Baker, S.L., Anderson, R.A., & Corazzini, K. (2012). Registered nurse retention strategies in nursing homes: A two factor perspective. *Health Care Manager Review, 31*(3), 246-256. doi: 10.1097/HMR.0b013e3182352425

Johnstone, M.J. (2012). Academic freedom and the obligation to ensure morally responsible scholarship in nursing. *Nursing Inquiry, 19*(2), 107-115. doi: 10.1111/j.1440-1800.2011.00553.x

Koskinen, L., Mikkonen, I., Graham, I., Norman, L.D., Richardson, J., Savage, E., & Schorn, M. (2012). Advanced practice nursing for enduring health needs management: A global perspective. *Nurse Education Today, 12,* 540-544. doi: 10.1016/j.nedt.2011.06.010. Epub 2011 Aug 11

Kovner, C.T., Brewer, C., Katigbak, C., Djukic, M., & Fatehi, F. (2012). Charting the course for nurses' achievement of higher education levels. *Journal of Professional Nursing, 28*(6), 333-343. doi: 10.1016/j.profnurs.2012.04.021

Kuo, H.T., Lin, K.C., & Li, I.C. (2014). The mediating effects of job satisfaction on turnover intention for long term care nurses in Taiwan. *Journal of Nursing Management, 22,* 225-233. doi: 10.1111/jonm.12044

Lange, J., Wallace, M, Gerard, S., Lovanio, K., Fausty, N., & Rychlewicz, S. (2009). Effect of an acute care geriatric educational program on fall rates and nurse work satisfaction. *The Journal of Continuing Education in Nursing, 40*(8), 371-379. doi: 10.3928/00220124-20090723-03

Lavoie-Tremblay, M., Paquet, M., Duchesne, M.A., Santo, A., Gavrancic, A., Courcy, F., & Gagnon, S. (2010). Retaining nurses and other hospital workers: An intergenerational perspective of the work climate. *Journal of Nursing Scholarship, 42*(4), 414-422. doi: 10.1111/j.1547-5069.2010.01370.x

Levin, R.F., Fineout-Overholt, E., Melnyk, B.M., Barnes, M., & Vetter, M.J. (2011). Fostering evidence based practice to improve nurse and cost outcomes in community health

settings: A pilot of the Advancing Research and Clinical Practice through Close Collaboration model. *Nursing Administration Quaterly, 35*(1), 21-33. doi: 10.1097/NAQ.0b013e31820320ff

Li, Y., & Jones, C.B. (2013). A literature review of nursing turnover costs. *Journal of Nursing Management, 21*, 405-418. doi: 10.1111/j.1365-2834.2012.01411.x

McGilton, K.S., Boscart, V.M., Brown, M., & Bowers, B. (2014). Making tradeoffs between the reasons to stay employed in long term care homes: Perspectives of licensed nursing staff. *International Journal of Nursing Studies, 51,* 917-926. doi: 10.1016/j.ijnurstu.2013.10.015. Epub 2013 Oct 27

Murff, M. & DeFer, T. (2010). Improving controllable nursing retention. *Nurse Leader,*53-57. doi:10.1016/j.mnl.2009.02.005

Nedd, N. (2006). Perceptions of empowerment and intent to stay. *Nurse Economics, 2*(1), 1-13. https:www/nursingeconomics.org

Oermann, M.H. & Hays, J.C. (2011). *Writing for publication in nursing, 2nd edition*. New York, New York: Springer Publishing Company, LLC.

Oster, K.A.& Oster, C.A. (2015). Special needs population: Care of the geriatric patient population in the perioperative setting. *AORN Journal, 101*(4), 444-456. doi:10.1016/j/aorn.2014.10.022

Oyeleye, O., Hanson, P., O'Connor, N., & Dunn, D. (2013). Relationship of workplace incivility, stress, and burnout on nurses' turnover intentions and psychological empowerment. *The Journal of Nursing Administration, 43*(10), 536-542. doi: 10.1097/NNA.0b013e3182a3e8c9

Palmer, S. (2014). Nurse retention and satisfaction in Ecuador: Implications for nursing administration. *Journal of Nursing Management, 22,* 89-96. doi: 10.1111/jonm.12043

Polit, D.F. (2010). *Statistics and Data Analysis for Nursing Research, 2nd ed.* Upper Saddle River, NJ: Pearson Education Inc.

Ramos-Freire, E.M. & Rocha-Batista, R.C. & Martinez, M.R. (2014). Project management for hospital accreditation: A case study. *Online Brazilian Journal of Nursing, 15*(1), 96-108. https://www.objnursing.uff.br

Rajapaksa, S. & Rothstein, W. (2009). Factors that influence the decisions of men and women nurses to leave nursing. *Nursing Forum, 44*(3), 195-206. doi: 10.1111/j.1744-6198.2009.00143.x

Reiner, K., Palumbo, M.V., McIntosh, B., Rambur, B., Kolodinsky, J., Hurowitz, L., & Ashikaga, T. (2005). Measuring the nursing workforce: Clarifying the definitions. *Medical Care Research & Review, 62*(6), 741-755. doi: 10.1177/1077558705281073

Roethler, C., Adelman, T., & Parsons, V. (2011). Assessing emergency nurses' geriatric knowledge and perceptions of their geriatric care. *Journal of Emergency Nursing, 37*(2), 132-137. doi: 10.1016/j.jen.2009.11.020. Epub 2010 Feb 6

Rosswurm, M.A., Larrabee, J.H., & Nunley, B.L. (2003). Improving geriatric knowledge, competency, and resourcefulness of home care nurses and aides. *Home Healthcare Nurse, 21*(5), 300-306. https://www.journals.lww.com/homehealthcarenurseonline/pages/default.aspx

Schafer, M.A., Sandau, K.E., & Diedrick, L. (2012). Evidence-based practice models for organizational change: overview and practical applications. *Journal of Advanced Nursing, 69*(5), 1197-1209. doi: 10.1111/j.1365-2648.2012.06122.x

Schostak, J., Davis, M., Hanson, J., Sschostak, J., Brown, T., Driscoll, P., Starke,I. & Jenkins, N. (2010). Effectiveness of continuing professional development project: A summary of findings. *Medical Teacher, 32*(7), 586-592. doi: 10.3109/0142159X.2010.489129

Stone, R.I. & Barbarotta, L. (2011). Caring for an aging America in the twenty first century. *Journal of the American Society on Aging, 34*(4), 5-10. https://www.asaging.org/generations-journal-american-society-aging

Taylor, Y.J., & Nies, M.A. (2013). Measuring the impact and outcomes of maternal child health federal programs. *Maternal Child Health Journal, 17*(5), 886-896. doi: 10.1007/s10995-012-1067-y

Towner, E.M. (2006). Assessment of geriatric knowledge: An online tool for appraising entering APN students. *Journal of Professional Nursing, 22*(2), 112-115. doi: 10.1016/j.profnurs.2006.01.004

Trewet, C.B. & Fjortoft, N. (2013). Evaluation of the impact of a continuing professional development worksheet on sustained learning and implementing change after a continuing pharmacy education activity. *Research and Social Administrative Pharmacy, 9*, 215-221. doi: 10.1016/j.sapharm.2012.06.002. Epub 2012 Sep 19

Tucker, S.K. & Sherrod, R.A. (2011). Recruitment and retention of scholarship recipient nursing students and staff. *International Journal of Nursing Education Scholarship. 13*(8).doi: 10.2202/1548-923X.2273

United States Census: Retrieved from http://www.census.gov/library/publications/2011/compendia/statab/131ed/births-deaths-marriage-divorce.html

Van den Heede, K., Florquin, M., Bruyneel, L., Aiken, L., Diya, L., Lesaffre, E., & Sermeus, W. (2013). Effective strategies for nurse retention in acute hospitals: A mixed method study. *International Journal of Nursing Studies, 50,*185-194. doi: 10.1016/j.ijnurstu.2011.12.001. Epub 2011 Dec 26

Venturato, L. & Drew, L. (2010). Beyond doing: Supporting clinical leadership and nursing practice in aged care through innovative models of care. *Contemporary Nurse, 35*(2), 157-170. doi: 10.5172/conu.2010.35.2.157

Wallace, M., Greiner, P., Grossman, S., Lange, J., & Lippman, D.T. (2006). Development, implementation, and evaluation of a geriatric nurse education program. *The Journal of Continuing Eduction in Nursing, 37*(5), 214-217. https://www.healio.com/nursing/journals/jcen

Wendel, V.I., Durso, S.C., Cayea, D., Arbaje, A.J., & Tanner, E. (2010). Implementing staff nurse geriatric education in the acute hospital setting. *MEDSURG Nursing, 19*(5), 274-280. https://www.medsurgnursing.net/

Wendsche, J., Hacker, W., Wegge, J., Schrod, N., Roitzch, K., Tomaschek, A., & Kliegel, M. (2014). Rest break organization in geriatric care and turnover: A multimethod cross sectional study. *International Journal of Nursing Studies, 51,* 1246-1257. doi: 10.1016/j.ijnurstu.2014.01.006. Epub 2014 Jan 19

Xiao, L.D., Shen, J., Wu, H., Ding, F., He, X., & Zhu, Y. (2013). An innovative continuing nursing education program targeting key geriatric conditions for hospitalized older people in China. *Educational Gerontology, 39,* 585-598. doi: 10.1080/03601277.2012.70423

Appendix A: Letter of Invitation

Dear nursing staff,

My name is Ghislaine Barry, a Doctor of Nursing Practice student from Walden University conducting a research study aimed at exploring and understanding the challenges of caring for geriatric patients. I met many of you while completing a practicum at the organization and appreciate how limited and valuable your time is.

I am inviting all of you to complete surveys for the purpose of generating and collecting program data. The surveys will be collected on two occasions (pre and post test), before and after program completion. The surveys are brief and should take approximately 15 minutes to complete. Please complete the surveys on site, in private. All information you provide will remain confidential and be de identified for analysis.

Your participation in the surveys is completely voluntary. If you do not wish to complete the surveys, do nothing further.

If you do wish to participate please complete and return the attached pretest survey to the designated drop box using the enclosed envelope. I will collect the pre test surveys one week prior to the start of the program. At the conclusion of the program, post test surveys will be placed in your individual mail slots. Please complete and return surveys to the designated drop box using the envelope that will be provided to you. I will collect the post test surveys one week following program completion.

If you have any questions about the surveys, please feel free to contact me at Ghislaine.barry@waldenu.edu. Thank you very much for your time.

Appendix B: Pre Test and Post Test Survey

Indicate the degree to which you agree with the following statements:

1). My knowledge of geriatrics is adequate for my day to day practice.

□5-Strongly Agree □4-Agree □3-Neither Agree or Disagree □2-Disagree □ 1-Strongly Disagree

2). In general, I am satisfied with my current job.

□5-Strongly Agree □4-Agree □3-Neither Agree or Disagree □2-Disagree □ 1-Strongly Disagree

3). I intend to remain employed at this organization for the next 1-3 years.

□5-Strongly Agree □4-Agree □3-Neither Agree or Disagree □2-Disagree □ 1-Strongly Disagree

Demographic Questions

4). What is your gender?

□ Female □ Male

5). What is your age range?

□ 18-25 □ 26-49 □ 50-64 □ 65 and older

6). What is your highest level of education

□ High School diploma □LPN □ RN/Associate's Degree □ RN/Bachelor's Degree

7). How long have you been employed at the Organization

□ less than 1 year □ 1-5 years □ 6-10 years □ 15-20 years □ 20+ years

Thank you very much for completing the survey!

Appendix C: Program Evaluation Form

Date: _____

Trainer: _____

Module # _____

Instructions: Please indicate your level of agreement with the statements below (#1-5).

1. The objectives of the training were clearly defined.
   □ Strongly Agree □ Agree □ Neutral □ Disagree □ Strongly Disagree

2. The topics covered were relevant to me.
   □ Strongly Agree □ Agree □ Neutral □ Disagree □ Strongly Disagree

3. The training experience will be useful in my day to day practice.
   □ Strongly Agree □ Agree □ Neutral □ Disagree □ Strongly Disagree

4. The trainer was knowledgeable about the training topics.
   □ Strongly Agree □ Agree □ Neutral □ Disagree □ Strongly Disagree

5. The time allotted for the training was sufficient.
   □ Strongly Agree □ Agree □ Neutral □ Disagree □ Strongly Disagree

6. What did you like most about this training?

7. What did you like least about this training?

8. How will the training change you practice?

9. What additional trainings would you like in the future?

10. Please share other comments here:

Thank you for your feedback!

Appendix D: Program Evaluation Results

Participant Responses (N=8)	Frequency
The objectives of the training were clearly defined.	
Strongly Agree	8
Agree	
Neutral	
Disagree	
Strongly Disagree	
The topics covered were relevant to me.	
Strongly Agree	7
Agree	1
Neutral	
Disagree	
Strongly Disagree	
The training experience will be useful in my day to day practice.	
Strongly Agree	5
Agree	3
Neutral	
Disagree	
Strongly Disagree	
The trainer was knowledgeable about the training topics.	
Strongly Agree	3
Agree	5
Neutral	
Disagree	
Strongly Disagree	
The time allotted for the training was sufficient.	
Strongly Agree	6

Agree	2
Neutral	
Disagree	
Strongly Disagree	
What did you like most about this training?	
Small group size.	5
Collaboration/discuss topics.	3
What did you like least about this training?	
Nothing, enjoyed training.	5
Time of day/too early.	3
How will the training change you practice?	
Enhanced knowledge.	4
Improved assessment skills.	3
Patient awareness.	1
What additional trainings would you like in the future?	
No response.	2
Geriatric medications.	1
Regulatory issues.	1
More case studies.	1
Dementia care.	1
Managing emergencies.	1
Any training available.	1
Please share other comments here:	
Thanked presenter/improved geriatric knowledge.	5
Thanked the presenter.	2
Liked the format, length, and content of modules.	1