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Increasing Fall Awareness Through Nursing Staff Education

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This is to certify that the doctoral study by

Evelyn Ahiante Dennis

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

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Abstract

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Project Submitted in Partial Fulfillment

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Doctor of Nursing Practice

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Abstract

Patient falls are a significant healthcare concern, with the highest risk being among older adults aged 65 and older. A lack of nursing knowledge can contribute to patient falls. This DNP project was conducted in the medical-surgical trauma unit of a 137-bed local rehabilitation center in Northern Georgia. The intention of the project was to understand if a nursing staff education program would increase knowledge regarding falls prevention. Kurt Lewin's change theory provided the framework for the project. The project participants were nine medical surgical nurses. Using the analysis, design, development, implementation (ADDIE) model, a falls prevention education program was created. Nurses received 4 hours of in person education on how to use the John Hopkins Fall Risk Assessment Tool (JHFRAT). The project adopted a pretest and posttest design, using a 10-item questionnaire. Data were analyzed using a paired t-test, a P-value of 0.05 was considered significant. The pretest results indicated moderate fall prevention knowledge, while the posttest data indicated improved fall prevention knowledge. The aggregate t-test showed and overall p value of 0.0038, which is statically significant. The specific questions that demonstrated significance were: (a) patient factors assessed by the JHFRAT, (b) frequency of fall risk assessment (c) specifics pertaining to JHFRAT instrument, and (d) factors that increase the fall risk of the patients. These findings imply that a fall prevention nursing education program can increase the knowledge of the nursing staff. This DNP project's findings support social change by providing recommendation for continued training of nursing staff in the care and assessment of patients' fall risk in the rehabilitation, surgical, medical, and psychology units.

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Dedication

This project is dedicated to my loving family: my children, Olayinka, Adebola, and Adefemi, and my wonderful husband, Olayinka Dennis, for his endless and painstaking support throughout the journey. What could I have done without all your love, prayers, and support? Nothing! But you, my loving family, were my rock, encourager, playfield, and greatest cheerleader when I was at my lowest ebb. I am very grateful.

Special thanks also go to my friend Sandra Igwe Udo and my beloved sister Ms. Sade Love for their unrelenting and motivating pieces of advice, encouragement, support, and prayers, and for constantly reminding me to be confident and tap into my willpower. Above all, I dedicate this project to my awesome and miracle-working Almighty God, who gives me life, wisdom, and knowledge and renews my strength every day unconditionally. Lord, I give you all the adoration and glory for making this dream a reality. Thank you, my God, and my King, for all your grace and favors upon my life, and for making me a proud and honorable DNP holder. Amen.

Acknowledgments

I humbly wish to express my gratitude and thanks to Dr. Hubbard for her expert advice and criticism, support, patience, and kind words of encouragement during this challenging project. I am very thankful that I am blessed with an excellent mentor, in fact, the best of the best.

To you, Dr. Rouse; I am grateful that you are part and parcel of this journey with me as my honorable DNP project committee appointee. I also wish to acknowledge Dr. White for partaking in this arduous journey with me, starting way back from Chamberlain College of Nursing as my professor while pursuing my BSN Nursing program, as a great mentor during my MSN pursuit as a psychiatric nurse practitioner, and finally as my preceptor and mentor in this present DNP program. WOW! Incredible, and what a journey with you! I am most humbled and blessed to have benefitted from your wealth of knowledge and experience and the unparalleled support you have given me over the years. I am deeply grateful. I salute you for your professional support as well as a wellness and health coach, ensuring that I maintain a normal and holistic health balance and equilibrium to be successful. I am very grateful.

Last but not least, I would like to recognize and thank Dr. Summers for her support in also being on this exciting and memorable academic journey with me. Finally, I want to thank the facility for allowing me to use their implausible site for my practicum and for overall support and participation in my educational program.

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Section 1: Nature of the Project

Introduction

Patient falls are a significant global public health concern. The risk and prevalence of hospital falls are highest among older adults aged 65 and older. One in four older adults fall each year (Centers for Disease Control and Prevention [CDC], 2019b; National Institute on Aging [NIA], 2020). A patient fall is described as an unintentional descent to the ground, which can be with or without injury to the patient as well as fatal or nonfatal (National Database of Nursing Quality Indicators [NDNQI], n.d.; World Health Organization [WHO], 2018). Most hospital beds are occupied by older adults aged 65 years and older, most of whom are hospitalized for injuries from falls. Thus, falls are a high priority in hospital risk management and are a patient safety issue in hospital units (LeLaurin&Shorr,2019).

This Doctor of Nursing Practice (DNP) project focuses on hospital falls in the medical-surgical trauma unit of a 137-bed local rehabilitation center in Northern Georgia. The project involves planned change management to facilitate evidence-based practice (EBP) in a local rehabilitation facility's clinical setting. A rehabilitation facility aims to increase mobility, function, and independence for older adult patients, reduce debilitating symptoms, and improve patients' quality of life (Hill et al., 2015). The overall goal of this DNP project was to improve the quality of care at the facility through the implementation of an evidence-based senior fall prevention program. The project's target participants were nine registered nurses (RNs). The project provided a structured nursing staff education program that focuses on nursing staff knowledge of inpatient geriatric fall

prevention as a change that can positively impact healthcare outcomes (patient and hospital) through direct and indirect care (Horntvedt et al., 2018; Noviyanti et al., 2018). The DNP project's potential positive social change implications include promoting attitudinal and behavioral change among nursing staff. Nursing staff education will increase knowledge that institutional falls in elderly patients (and other vulnerable populations) are preventable "never events" with safety and quality of service, care, advocacy, and justice implications (Waters et al., 2015).

Each year, about 700,000 to 1 million hospitalized older adults fall at a rate of 3-5 per 1,000 bed days, with much higher rates reported from settings such as rehabilitation units (Lee et al., 2013). Institutional falls lead to adverse patient outcomes (injury, death) and negative hospital outcomes (cost, reputation; NIA, 2020). Falls lead to 7 million injuries, 2.8 million emergency treatments, 800,000 hospitalizations, and 27,000 deaths annually (Office of Disease Prevention and Health Promotion [ODPHP], 2020). Falls cost the U.S. government about $50 billion, 75% of which is covered by the Centers for Medicare and Medicaid Services (CMS.gov, n.d.).

Staff nurses may have the most significant influence on rehabilitation institution fall prevention and reduction; nurses offer 24-hour patient service, are always present, continuously monitor for condition changes, and interact with patients in the most consistent manner (King et al., 2018). Successful fall prevention programs are developed and implemented by nurses who have knowledge of epidemiology, risk factors, and protective factors for hospital falls (American Nurses Association [ANA], 2018). Nurses use EBPs, including multifactorial and multicomponent intervention strategies, to reduce

risk or prevent inpatient geriatric falls (King et al., 2018). Patient falls are used as a nursing-sensitive quality indicator. Thus, the nursing staff assumes responsibility for institutional falls (ANA, 2018). King et al. (2018) argued that falls create a sense of guilt, stress, anxiety, self-doubt, regret, and responsibility in nurses; nurses often become "second victims" in the event that a patient falls.

<div align="center">**Problem Statement**</div>

Local Nursing Practice Problem

The local nursing practice problem that was the focus of this DNP project is an increase in inpatient falls among the elderly in the medical-surgical trauma unit of a 137-bed local rehabilitation center in Northern Georgia. The nursing staff at this facility were currently unaware of current clinical best practice guidelines (CPGs) related to fall prevention and did not practice the latest EBP.

Local Relevance of Addressing the Problem

The local relevance of the need to address the inpatient geriatric falls at the rehabilitation facility lies in the fact that there had been a significant increase in falls at this facility. Lack of nursing staff knowledge has been linked to increased falls (King et al., 2018). Nursing staff education on hospital fall prevention in the local context will mitigate fall-related negative outcomes, including injury, disability, prolonged hospitalization, institutionalization, morbidity/comorbidity, increased care costs, and mortality (King et al., 2018; Lee et al., 2013).

Significance of Project for Nursing Practice

Nursing scholars and practitioners emphasize the importance of an evidence-based fall prevention program that applies to multifactorial and multicomponent elements and interdisciplinary/multidisciplinary clinical practice strategies. Hospital falls have been described as a nurse-sensitive indicator of safety and quality. A reduction in falls and fall-related injuries would have positive implications for nursing practice, care costs, patient satisfaction, morbidity, mortality, and hospital performance metrics.

Purpose Statement

The Gap in Nursing Practice

The meaningful gap in practice that this DNP project addressed related to the nursing staff's lack of knowledge. Lack of knowledge concerning fall prevention had challenged compliance with established CPGs at the local rehabilitation facility, with a consequent increase in patient falls (Haines et al., 2015).

Practice-Focused Question

The guiding practice-focused question for this DNP project was the following: Does the nursing staff education program increase knowledge in fall prevention? This project's overall intent was to follow the best practice guidelines to decrease falls in this rehabilitation facility.

Addressing the Gap in Practice

The proposed DNP project had the potential to address the identified gap in practice. The project can bridge theory-practice gaps in institutional fall prevention by supporting theory and nursing practice. As elucidated by Safazadeh et al. (2018), the

nursing profession is based on solid theories of the art of care and its outcomes. However, the theory-practice gap challenges quality care (Safazadeh et al., 2018). The DNP project addressed the theory-practice gap through conducting and evaluating a sustainable nursing staff on-the-job education program. Toward this end, the project adopted and utilized the Stop Elderly Accidents, Deaths, and Injuries (STEADI) Toolkit. Using STEADI, the nursing staff was educated on patient screening to assess risk for falls, assess modifiable risk factors, and intervene to reduce risk (Johnston et al., 2019).

Nature of the Doctoral Project

Sources of Evidence

This project reviewed many scholarly and professional papers. The writings reviewed include professional and multidisciplinary journals, newsletters, databases, and published manuscripts. The research also considered literature about EBP, conceptual theories, models, and fall assessment and prevention. Abstracts, titles, author guidelines, and full texts were accessed online. The following sources of evidence informed this DNP project: books; journal articles retrieved from databases including PubMed, Medline, and CINAHL; credible agency or practice organization websites, including those of the CDC, ANA, Agency for Healthcare Research and Quality (AHRQ), WHO, NIA, and National Institute for Health and Care Excellence (NICE). The project's topic and the problem have been described from the sources, and the project tools identified: an evidence-based clinical practice toolkit (STEADI) and methods of instruction(American Association of Colleges of Nursing [AACN], 2006, 2018).

The search used the following keywords: *falls*, *prevention*, *injury*, *rehabilitation*, *nursing education*, *hospital*, *healthcare*, *evidence-based practice*, and *clinical practice guidelines*. The sources of evidence included materials produced within the last 5 years.

Summary of the Approach

After the formulation of the project question, an extensive search of available knowledge was done. Before the implementation of the project, I received approval from the institution. The project's target participants were nine RNs. Nurses were trained for 1 hour each week for 1 month, representing 4 hours of staff education.

A certificate of completion was issued for nurses' knowledge. Knowledge of hospital fall prevention was measured before the beginning of the project through class participation as presurvey data results (pretest). Demographic data were collected to determine the project's success as presurvey data at its completion (posttest). Pre and posttest scores were used to determine whether an increase in fall prevention knowledge occurred through conscious understanding among participating staff. The Johns Hopkins Fall Assessment Tool kit (JHFRAT)was used to conduct the pre- and postsurvey. Descriptive statistics were used to analyze the data.

Anticipated Findings

The purpose of developing the DNP project was to bridge the identified nursing gap in practice at a local rehabilitation hospital facility, which was a lack of knowledge on fall prevention that challenged compliance with evidence-based clinical practices for in-hospital fall prevention due to limited understanding among staff regarding the severity of the issue and its impact on long-term care for the target population. The

project will be achieved by educating nurses. The findings from the pretest and posttest analysis demonstrate decreased knowledge about fall prevention among nurses at a local rehabilitation facility.

Significance

Project Stakeholders

Stakeholders directly or indirectly affected by institutional falls were identified. Patients will benefit from more individualized interventions that improve the quality of care and safety, and families will benefit from reduced hospital costs (Heng et al., 2020). There is improved collaboration and teamwork among health care workers at the facility, who will also gain the knowledge necessary to enhance the quality of service and patient satisfaction (Hill et al., 2015). The facility will benefit from a good reputation and ratings and reduced budget costs that would otherwise be used in emergency treatments of preventable patient falls (McKenzie et al., 2017). The facility staff will adopt evidence-based clinical practices that will improve organizational performance and comply with state and federal standards (Rosen et al., 2018).

Contributions to Nursing Practice

In terms of the DNP project's potential contributions to nursing practice, the nurses were provided with evidence-based fall prevention clinical practice guidelines and a method to use critically appraised and scientifically proven evidence for preventing hospital falls. Nurses will use acquired knowledge to deliver high-quality health care to older adult patients (Stevens, 2013).

Potential Transferability

The DNP project has potential transferability to similar practice areas. The project findings may provide a framework to prevent other healthcare-associated harms and "never events" in various clinical settings. Project findings may also be applied in different demographic contexts such as pediatric and behavioral health facilities where the risk for falls is too high.

Implications for Positive Social Change

Nurses are valuable assets as change agents in reducing healthcare-associated harm such as falls. The proposed DNP project is an evidence-based, sustainable, and transformative practice program that can result in positive outcomes, including health promotion, knowledge creation, behavioral change, and improved human and social conditions (Rosen et al., 2018). Specifically, this project's results will enhance understanding of the pressing dangers of falls among rehabilitating patients. Educating nursing staff at this facility will prevent falls, resulting in a reduction in morbidity and mortality.

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Summary

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In this section, I described the DNP project and identified the practice problem, hospital falls in older adult patients, and the significant practice gap, educating nursing staff on fall prevention. Older adult falls are a significant concern to both this population and public health. The DNP project proposed a nursing staff education program to increase knowledge of evidence-based clinical practices in fall prevention. The project aimed to address the problem of falls by focusing on the practice focused question: Does

the nursing staff education program increase knowledge of fall prevention? In Section 2, I

review and synthesize available literature and expertise on the topic of hospital falls and

provide a foundation of evidence. Section 2 addresses prior scholarship on the subject

matter's concepts, models, and theories and relates it to the current DNP project.

Section 2: Background and Context

Introduction

Practice Problem

A *fall*, which is defined as an untoward event that results in an individual unintentionally coming to rest, or landing, on a lower level surface or object, typically rapidly and without control, is a complex multifactorial phenomenon (WHO, 2018). Globally, falls are a leading external cause of unintentional injury, disability, morbidity, and mortality in older adults (WHO, 2018). Falls are a common and serious issue among older adults and a significant global public health concern. The risk and prevalence of falls are highest among hospitalized older adults (NIA, 2020). While falls in the general population typically result from occupational, leisure, or sports-related activities, hospitalized older adults, considered to be senior persons aged 65 years and older (ODPHP, 2020), are at greater risk of falling in their day-to-day activities or movement within a hospital facility (Aging.com, 2017).

Older adult hospital falls result in some adverse outcomes: prolonged hospitalization, premature nursing home placement, increased care costs, impaired mobility and function, disability, injury and pain, distress and anxiety, and geriatric morbidity and mortality (King et al., 2018; Lee et al., 2013). Reports indicate that over 30% of older adult hospital falls cause physical injury. Up to 11,000 inpatient geriatric falls result in death each year, causing emotional and psychological suffering for families and communities (Vonnes & Wolf, 2017). The fear of geriatric falls leads to further

mobility restrictions, leading to further loss of strength, independence, and function (King et al., 2018; NIA, 2020).

Lack of knowledge among nursing staff leads to inadvertent noncompliance with EBPs and CPGs provided at both hospital and state/federal government levels, resulting in increased hospital falls (King et al., 2018). The nursing staff has a critical role in screening geriatric patients for the risk of falls and implementing preventive strategies for patients at risk (Lee et al., 2013). This project provided nursing staff education using the STEADI toolkit and the JHFRAT.

In this section, the concepts, models, and theories relevant to the DNP project are described; the relevance of the DNP project to nursing practice is discussed; the local background and context for the practice problem are elucidated; and my role as I and the role of the project team are considered.

Practice-Focused Question

The guiding practice-focused question for this DNP project is the following: Does the nursing staff education program increase knowledge in fall prevention? As such, it effectively adds knowledge and intent to facilitate positive outcomes through adopted behaviors. The project addresses this question by providing nursing staff education by using the STEADI toolkit and JHFRAT screening.

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Purpose of the DNP Project

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The purpose of the DNP project is to bridge the identified nursing gap-in-practice at a local rehabilitation hospital, which is a lack of knowledge by the nursing staff about fall prevention. Even though the team has some basic knowledge regarding the adverse

effects that falls have on patient rehabilitation, its members have limited firsthand understanding of EBP related to fall prevention. The project provides nursing staff at a local rehabilitation facility with practical, evidence-based knowledge related to fall prevention.

Concepts, Models, and Theories

The concepts, models, and theories that informed the proposed DNP project are named and described. A rationale for their use is provided.

Concepts

Significant concepts linked throughout this DNP project include clinical pathway, environmental inspection, and hazard mitigation (EIHM), EBP, clinical practice guidelines, hospital-acquired conditions, hourly rounding, multifactorial fall prevention, multifactorial risk assessment, nursing-sensitive indicators, and universal fall precautions. Combined, the concepts contain all aspects involved in effective fall prevention education programs.

Clinical Pathway

A clinical pathway is a structured multidisciplinary plan of care developed and delivered through training to staff nurses to support CPGs. For this staff education project, it provides a framework that guides each step of hospital fall management and reduces the possibility that busy staff nurses will forget, disregard, or overlook any important component of the evidence-based strategy for fall prevention and patient care (AHRQ, 2013).

Environmental Inspection and Hazard Mitigation (EIHM)

EIHM involves the assessment of potential environmental risks or threats that may challenge patient mobility, such as slippery floors, as well as compliance with hospital safety policies or regulations and implementation of measures to address identified risks (AHRQ, 2013).

Evidence-Based Best Practices (EBPs)

EBPs are care processes that, based on research studies, scholarly and practice literature, and expert opinion, represent the best way (in current professional nursing knowledge) to prevent falls in the hospital (Horntvedt et al., 2018).

Evidence-Based Clinical Practice Guidelines (CPGs)

CPGs are evidence-based/informed/systematically developed statements or recommendations aimed at assisting/guiding nursing practitioner and patient decisions about appropriate health care for specific clinical (uncertain) circumstances. CPGs assist/guide staff nurses to assess the benefits-risk balance of fall prevention interventions by critically appraising traditional and new strategies (Cabrera & Pardo, 2019).

Hospital-Acquired Conditions (HACs)

HACs are healthcare-associated harms or conditions that are not present during hospital admission but are acquired during the time of hospitalization (AHRQ, 2013).

Hourly Rounding

Hourly rounding consists of hourly nursing visits to check on patients between 6 a.m. and 10 p.m. and visits every 2 hours between 10 p.m. and 6 a.m. (AHRQ, 2013). It is a proactive EBP and CPG that involves monitoring for conditional patient and

environmental changes and assessing for patient care needs and safety risks (Harris et al., 2017). Nursing staff on this rehabilitation unit alternate with nursing assistants to complete hourly patient rounds. Nurses use the "5 P's" strategy during bedside rounds. The process helps staff nurses to focus on nurse-sensitive indicator items to mentally review when rounding on the patient (Brosey & March 2015). For example, according to AHRQ (2013), the 5 P's are as follows:

- Pain: Assess the patient's pain level and (if needed) provide pain medication.

- Personal needs: Assist in patient toileting and (if needed) empty bedpans/commodes/urinals and provide hydration and nutrition.

- Placement: Ensure that the patient's essential needs/assistive devices are within easy reach.

- Position: Assist patients in repositioning/turning for comfort/maintaining skin integrity.

- Prevent falls: Assist/teach patients/families to use (and always respond to) bed alarm/call light.

Multifactorial Fall Prevention (MFP)

MFP is an individualized nursing care planning intervention specifically to prevent patient falls (AHRQ, 2013). MFP interventions involve consideration of the patient's multifactorial risk factors for falling and deliver two or more component interventions, combined in different ways based on multifactorial risk assessment outcomes. MFP care plans are tailored to each patient's particular risk profile (Hopewell et al., 2019).

Multifactorial Risk Assessment (MFRA)

MFRA entails standardized and ongoing assessment of risk factors for hospital falls. Hospital falls have multiple risk factors that differ (in combinations and over time) among hospitalized patients. MFRA is a system that enables the identification of the risk factors most important to the patients in the rehabilitation unit (AHRQ, 2013). MFRA is an assessment system with multiple components that identifies a patient's risk factors for falling. The same vital questions are asked of each patient so that risks are not skipped or overlooked. Assessment is performed by a trained nurse (Bruce & Lamb, 2013).

Nursing-Sensitive Indicators (NSIs)

NSIs are measures of care quality that are distinct and specific to nursing (which differ from medical indicators) and that reflect the structure, processes, outcomes, and impact of nursing care (National Database of Nursing Indicators [NDNQI], n.d.)

- *structural indicators*: qualification, skill, and supply level of nursing staff

- *process indicators*: quality of and method of patient care and safety assessment and nursing interventions and perceived job satisfaction of nursing staff

- *outcome indicators*: patient outcomes that are linked to the quantity and quality of nursing care, such as patient falls (NDNQI, n.d.)

Universal Fall Precautions (UFPs)

UFPs are the cornerstone of effective hospital fall prevention programs; UFPs apply to all patients at all times, regardless of fall risk (AHRQ, 2013). This requires qualified staff nurses to offer structured training to all hospital staff, whether or not they

are clinicians regularly interacting with patients and embed a fall prevention culture in the hospital.

Models

This DNP project adopted the STEADI toolkit and the JHFRAT. The STEADI is a toolkit that complements one of the many efforts that the government has attempted to put in place to prevent falls among older adults. The toolkit's advantages include the fact that it helps to reduce fall-related hospitalizations, avert unnecessary healthcare costs, and improve older patients' lives and independence. The JHFRAT is advantageous because it reduces the rates of falls, reduces injuries from falls, and standardizes the risk assessment of falls. It also helps to improve hospital and patient safety while adapting to a specific patient population's needs. It has been demonstrated that the JHFRAT can reduce the rate of falls for patients by about 21% and the rate of injury by 51% (Poe et al., 2018). The assessment of the risk of falls could prove to be challenging. Still, by using the tools, nurses find it very easy to determine how much risk patients are exposed to and therefore enable them to design the appropriate interventions.

Analyze, Design, Develop, Implement, and Evaluate (ADDIE) Model

According to Boswell and Cannon (2017), nursing educators can help to ensure patient safety by employing evidence-based design principles in nursing education and training. Education and training are important factors in promoting quality care and patient safety by way of two major contributions: (a) they mitigate against risks and hazards of healthcare-associated injury or harm, or healthcare-acquired conditions

(HACs), and (b) they act as an intervention in eliminating or preventing healthcare-associated injury or harm or HACs (Patel et al., 2018).

However, all too often, nursing educators fail to realize that the training systems that they use may be part of the problem hindering patient safety interventions. Boswell and Cannon (2017) posited nurses need to adopt a systematic method of development of education and training programs to improve learner performance and proposed the use of instructional systems design (ISD). The ISD process involves five integrated steps: analysis, development, design, implementation, and evaluation (ADDIE; Boswell & Cannon, 2017). This DNP project will employ the ADDIE model to train nurses about EBPs in institutional fall prevention because it is flexible and systematic (CDC, 2019a). The application of ISD using the ADDIE approach will potentially eliminate or prevent education and training from being part of the problem with regard to institutional falls in older patients (Lu et al., 2016).

The CDC (2019a) presented ADDIE as a cyclical model, with each of the five stages (analyze, design, develop, implement, and evaluate) having a deliverable that feeds into the next stage. The model includes opportunities to gather feedback that informs training content development (CDC, 2019a).

Figure 1

Analyze, Design, Develop, Implement, and Evaluate (ADDIE)Cyclical Model
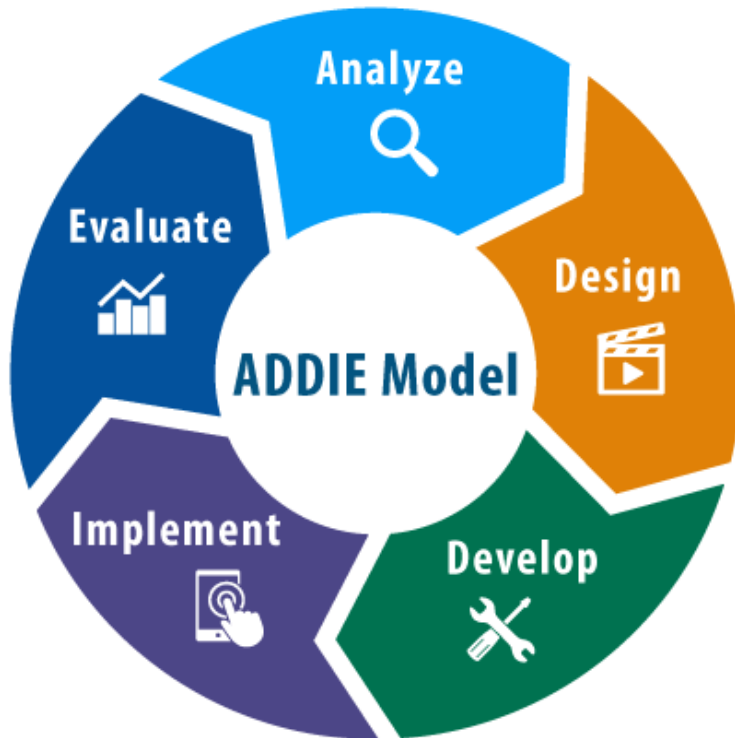
Note. From *Training Development: ADDIE Model*, by Centers for Disease Control and Prevention, 2019(https://www.cdc.gov/trainingdevelopment/develop_training.html). In the public domain.

Analysis. This stage involves understanding the current situation in terms of training, practice, knowledge gaps (training needs assessment and analysis), and the training's goal. This will help inform the strategy in terms of formulating the goal of the training and generating a training plan (CDC, 2019a).

Design. This is the "blueprint phase," where practical decisions are made based on all learnings from the analysis stage. Conclusions include the strategy to use in terms of delivery method, structure, period/length of the training, assessment method, and

feedback. A blueprint was developed with content from experts such as physical therapists, the senior nurse educator, the unit manager, and the nurse administrator to input this nursing staff education.

Development. In this stage, course content is developed and guided by the designed blueprint. Details are added to the core training content upon revision, and the course content is polished (e.g., by adding engaging graphics, colors, and fonts—elements that may be appealing to the audience; CDC, 2019a). The course is tested systematically and checked for accuracy of the content and for basic errors such as language (nurses must understand language), grammar and spelling, and mechanics. Content that is not tested may contribute to problems in achieving training goals.

Implementation. Courses are shared with the learners once they are completed and tested. The courses are delivered through lectures. The material will also be shared online via email. Implementation is determined by what was done in the design phase (CDC, 2019a).

The project's target participants were nine RNs. Nurses trained for 1 hour each week for 1 month, representing 4 hours of staff education.

A certificate of completion was issued for nurses' knowledge, and knowledge of hospital fall prevention was measured before the beginning of the project through class participation as presurvey data results(pretest). Demographic data were collected. At the completion of education, there was a posttest. Pre and posttest scores determined whether there was an increase in fall prevention knowledge. The JHFRAT was used to conduct the pre and postsurvey. Descriptive statistics were used to analyze the data.

Evaluation. Feedback was obtained throughout the stages and on every aspect of the training. It was imperative to revise the content so that improvements or changes can be made as needed. The participating nurses were requested to complete surveys both during the training and the pre /posttest and recommend an evaluation with the team to make a recommendation. Evaluation reports and actionable recommendations or changes for the current or future nursing staff training project were developed (CDC, 2019a).

Theories

A theory offers a guiding framework for a planned change management project to facilitate the implementation of EBP in a clinical setting (Christenbery, 2017). The approach adopted by the initiative that is currently proposed (DNP project offering nursing staff education on fall prevention)deliberate and systematic to ensure change is adopted in the dynamic and demanding nursing practice environment, specifically in a local rehabilitation facility that is the context of the project (Barrow et al., 2020). The stages of the project that were adopted are best described and guided by Kurt Lewin's (three-step) Change Theory (Lewin, 1947). This theory will provide the framework for the proposed EBP DNP initiative and is selected because it offers the most flexibility, minimizes disruption of the hospital's operations, and ensures sustainable change (Zaccagnini & Pechacek, 2019).

The theory provides a framework that provides a high level approach to nursing practice change management and quality of care improvement in a clinical setting. It gives the change agent (DNP student) a framework to implement a change effort (fall prevention in older adults at a local rehabilitation facility), which is typically a sensitive

process that should be as collaborative, participatory, and seamless as possible (Shirey, 2013). Kurt Lewin's Change Theory (Lewin, 1947) espouses that planned change and learning would enable nursing staff to address falls' practice problems and understand their profession and adopt EBP clinical practice guidelines to improve their quality of service.

Three significant concepts drive the theory (force-field analysis): driving forces, restraining forces, and equilibrium. Driving forces push for, seek, or facilitate change. Restraining forces oppose/resist the driving forces. Equilibrium is the status quo; change occurs. According to Lewin's Change Theory, behavior in nursing practice involves a dynamic balance of forces pulling in opposing directions. There is a 3-step process in Lewin's Change Theory: Unfreeze-Change-Freeze (Lewin, 1947).

The unfreezing stage prepared nursing staff to be ready for change. I (change agent) will help frontline nursing staff to understand how and why the education program can reduce falls (Zaccagnini & Pechacek, 2019).

Implementation of the change commenced once forces are "unfrozen." The practice-based nursing staff education about fall prevention offered in a participatory manner while maintaining open communication and engagement to minimize resistance and promote sustainable, permanent change (Melnyk & Fineout-Overholt, 2019). The last stage (freeze/refreeze) will involve making the EBP in fall prevention, as well as "fall-prevention/quality care-seeking behavior and attitudes" in frontline staff stick. The taught fall prevention CPGs cemented as the standard care procedures until the need for change felt once again (Wilkinson et al., 2015).

Terms

The following terms used in the DNP project are clarified:

Change: An external event (to the clinician) that has a clear and tangible start and stopping point (Dang & Dearholt, 2018).

Transition: Letting go of something familiar (e.g., procedure, tradition, habit, comfort zone) leading to a feeling of emotional or psychological loss in clinicians (Dang & Dearholt, 2018).

Relevance to Nursing Practice

History of the Broader Problem in Nursing

EBP in hospital fall prevention has been a longstanding quality and research priority for researchers, scholars, and practitioners in the field of medicine and nursing. EBP has its roots dating back several decades. In 1972, Archibald L. Cochrane criticized the health profession for administering treatments not supported by evidence. By the 1980s, the term evidence-based medicine was being used (Porter et al., 2018). In 1992, the Cochrane Centre was funded to support systematic reviews of randomized controlled trials (RCTs) of health care as sources of evidence. The Cochrane Collaboration was established in 1993 and provided systematic reviews about health care effectiveness (Masters, 2018).

In the 1980s, the University of Iowa Hospitals and Clinics (Porter et al., 2018). The tool facilitated the implementation of fall precautions and prevention practices for all adults and, later, all other high-risk inpatients. In 1995, the ANA's leadership made patient fall a nurse-sensitive indicator (Melnyk & Fineout-Overholt, 2019). In the same

year, ANA developed the Nursing Care Report Card for Acute Care that included falls as

a nurse indicator, emphasizing the critical role of nurses in inpatient, hospital, and care

outcomes in this area.

Current State of Nursing Practice and Recommendations

Building on early efforts, EBP was developed to include increasingly

sophisticated, improved, and cost-effective analytical techniques to measure the effect

and use feedback to promote sustainable improvement. EBPs have become a major

policy and practice subject in the nursing profession (Dang & Dearholt, 2018). Hundreds

of EBP models, concepts, and practice guidelines have been developed to improve care

quality, prevent healthcare-associated harm, and enrich the nursing experience. Clinicians

are often unaware of the many existing scales for fall risk assessment and intervention

and are uncertain about selecting and adopting an appropriate one. Perell et al. (2001)

conducted an analytic review that revealed that a substantial number of fall risk

assessment tools (e.g., Berg Balance Test, Dynamic Gait Index, Hendrich Fall Risk

Model, etc.) are readily available for clinician's adoption their fall prevention programs.

Perell et al. (2001) argued against individual facilities perceived to move, each seeking to

develop their unique scales; this may be counterproductive because scores will not be

comparable across facilities. Speroni et al. (2020) investigated the EBP models most used

in Magnet-designated hospitals throughout the U.S., and the most frequently reported

were the Iowa Model of Evidence-Based Practice, Johns Hopkins Nursing Evidence-

Based Practice Model, and Advancing Research and Clinical Practice Through Close

Collaboration Model; these models are recommended for use in education and training,

nurse residency programs, and EBP and research fellowships. Various practitioner organizations have also developed multifactorial/multicomponent recommendations for preventing in-facility falls among geriatric patients, with the most widely used being the STEADI (CDC, 2020; Johnston et al., 2019). As the STEADI toolkit is the most widely used evidence-based guideline, I selected this toolkit for this project.

How the Doctoral Project Advances Nursing Practice

The DNP project addressed a knowledge gap related to fall prevention practices for older adult patients hospitalized at a local rehabilitation facility in northern Georgia. By engaging and educating nurses on evidence-based fall prevention practices, the project facilitated advancing nursing practice to improve patient, professional, and hospital outcomes. The nine registered nurses who participated in the project will acculturate, support, and sustain EBP in fall prevention by understanding its positive effect on their patients' overall health outcomes. As part of the positive social change outcomes, nurses will be able to adopt, acculturate, support, and sustain evidence-based (best) clinical practices in care by enhancing the adoption of EBP for fall prevention (Speroni et al., 2020).

Local Background and Context

The project site was a 137-bed rehabilitation center in Northern Georgia specializing in spinal cord injury, arthritis, brain injury, multiple sclerosis, physical disabilities, and neurological disorders. With about 8,409 workers, the facility records approximately 133,512 hospitalizations and 301,854 home visits. The facility has

identified inpatient geriatric falls, particularly at the medical-surgical trauma unit, as a

significant problem adversely affecting patient and hospital outcomes. Administrators

had voiced concern about the rate of patient falls—currently, the facility rate of falls is 15

to 25 % for newly admitted patients in a month. The staff had observed that at least one

of two patients, especially the ambulatory ones, fall two or more times as they try to get

out of bed, adjust themselves in position, move around or to the bathroom, and locate

personal support devices bed alarms. Falls result in injuries, fractures, hospital bills, and

an increased chance of a second or third fall. The Affordable Care Act (ACA) levies

payment penalties to hospitals performing in the bottom 25 percent on hospital-acquired

conditions (HACs) (AHRQ, 2013). Preventing falls is a top priority throughout Georgia

hospitals.

Professional Context and Relationship to Doctoral Project

As structured by the American Association of Colleges of Nursing (ACCN,

2006), Doctor of Nursing Practice (DNP) is a practice-focused doctoral education

program that emphasizes practice and less emphasis on theory. This project is "a practice

application-oriented [final DNP] project" that will include "integrative practice

experiences and an intense practice immersion experience" (ACCN, 2006, p. 3). The

project will focus on a patient safety issue that is preventable: hospital falls.

As a DNP student conducting an education program about fall prevention, the

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Leadership for Quality Improvement and Systems Thinking will apply. As nurses are

educated, they will use this information to change the working environment to improve

patient outcomes. As a nurse who works on this unit in Northern Georgia, I have observed patient falls and the complications that result from the fall. The intent is that this project will reduce patient injury.

In the context of the present DNP project, I am responsible for facilitating the fall prevention education program, applying theory-in-practice. As a DNP student and an Advanced Practice Registered Nurse (APRN), I will take the initiative in planning staff education.I addressed the practice gap by providing staff education using the STEADI toolkit.

Role in the Doctoral Project

The role I assumed as a DNP student in the proposed project is that of an educator. I sought to employ my considerable practice experience and expertise to educate the nursing staff at the local rehabilitation facility. I used my DNP formal coursework training in pedagogy to prepare and deliver didactic content with input from experts. My role as an educator required that I search for evidence sources, extract, and appraise available knowledge, and prepare evidence-based content (including concepts, models, theories, evidence-based clinical best practices) to deliver. I designed an evidence-based fall prevention education program.

Other roles I assumed are change agent, leader, and facilitator (Masters, 2018). I will lead and facilitate the planning, implementation, and evaluation of the efficacy of the implemented education program, which will include collecting and analyzing data and disseminating the findings. I also assumed the role of advocate (for social change, justice)

as I implemented the project to ensure patients receive the care they deserve (ACCN, 2006).

Potential Biases and Ways of Addressing Them

As a nurse who works on this unit, I may potentially, advertently, or inadvertently twist or introduce an element of selective interpretation and reporting – probably to have "acceptable" outcomes that align with what peers, nurse educators, supervisors, and directors expect or want to hear about undermining bias in results. I overcame this bias by having the DNP project reviewed by my committee chairperson to check for methodology and rigor (Zaccagnini&Pechacek,2019).

<center>**Role of the Project Team**</center>

The DNP project team consisted of a senior nursing educator, administrator of nursing, the unit manager, and the physical therapist. The senior nurse educator served as a content expert to assist with the development of the format and content of the training. In addition, the senior nurse educator assisted in scheduling sessions and coordinating staff attendance to ensure it aligns with organizational practices.

The strong influence, high-interest project team members was the administrator of nursing (AON), whose support for the project is essential to ensure it is a success. This individual approved the project design, process, and implementation and review the educational materials to determine validity using appropriate tools. This individual also consented for the project to be conducted at the site for presentation to the nursing staff.

The unit manager was responsible for the dissemination of information about the class. This project team member is going to print the flyer. She sent the brochure to the unit staff to participate in the class voluntarily.

The physical therapist was responsible for assisting in the education project. This individual provided demonstrations of proper methods for helping patients in avoiding falls. For example, the physical therapist assisted in educating unit staff inpatient transfer from bed to chair or bed to a wheelchair.

Summary

The aim of section 2 was to propose, describe, and provide a rationale for the adoption of selected theories, models, and concepts for this project. This DNP project adopted the STEADI toolkit, the ADDIE model, and the JHFRAT. The Kurt Lewin (three-step) Change Theory was selected to explain the proposed change process at a local rehabilitation facility. This section addressed the knowledge gap related to fall prevention practices for older adult patients hospitalized at a local rehabilitation facility in northern Georgia. The role of me and the role of the project team were introduced.

Section 3 reintroduced the practice-focused question. The method for reviewing the sources of evidence was provided. Section 3 also focused on collecting and analyzing evidence that details the overall approach applied, the specific methods of data collection, and the analysis and synthesis techniques used.

Section 3:Collection and Analysis of Evidence

Introduction

Older adult hospital falls result in several adverse outcomes: prolonged

hospitalization, premature nursing home placement, increased care costs; impaired

mobility and function, disability, injury and pain, distress and anxiety, and geriatric

morbidity and mortality (King et al., 2018; Lee et al., 2013). Reports indicate that over

30% of older adult hospital falls cause physical injury. Up to 11,000 inpatient geriatric

falls result in death each year, causing emotional and psychological suffering for families

and communities (Vonnes &Wolf, 2017). The fear of geriatric falls leads to further

mobility restrictions, leading to further loss of strength, independence, and function (King

et al., 2018; NIA, 2020). Institutional geriatric falls cost the U.S. healthcare system $50

billion annually (CDC, 2019b). Risk factors for falls include gait disorders,

morbidity/comorbidity, polypharmacy, poor hospital design, and lack of awareness and

training (AHRQ, 2019; Najafpour et al., 2019).

The practice site for this DNP staff education project was a local 137-bed

rehabilitation center in Northern Georgia. In recent times, the facility had identified

inpatient geriatric falls, particularly in the medical-surgical trauma unit, as a significant

problem adversely affecting patient and hospital outcomes. Falls result in injuries,

fractures, increased hospital bills, and an increased chance of a second or third fall.

Administrators and staff at the facility are concerned about the negative trends. As a DNP

student and APRN, the situation prompted me to develop a staff education project to

address the gap in practice concerning evidence-based fall prevention practice for

hospitalized older adult patients. I received institutional approval number 02-12-21-0735742 and Institutional Review Board (IRB) approval from Walden. Nurses were trained for 1 hour each week for 1month, representing 4 hours of staff education. A certificate of completion was issued for nurses' skills, and knowledge of hospital fall prevention was determined through pre and posttest using the JHFRAT.

Practice-Focused Question(s)

In Georgia, a large proportion of fall-related hospitalizations occur among older adult patients. The setting was at a local rehabilitation facility. The problem was due to the practice gap in the lack of nursing staff knowledge about evidence-based fall prevention strategies. The guiding practice-focused question for this DNP project was the following: Does the nursing staff education program increase knowledge in fall prevention? I sought to find out if a nursing staff education program employing the STEADI toolkit increased nurses' knowledge of evidence-based fall prevention strategies.

Sources of Evidence

Study Design

The pretest and posttest study design were used in this study. This design was selected because it could indicate whether a staff education program increased knowledge in fall prevention.

Participants

The targeted study participants were the nurses working in the medical-surgical trauma unit of the 137-bed rehabilitation center in Georgia. The nurses were sampled

conveniently. The inclusion criteria applied to adult nurses above 25 years of age who had worked in the medical-surgical trauma unit for more than 1year. Exclusion criteria applied to those who did not work in the unit within the rehabilitation unit or had worked in the unit for less than 1year. Participants were not excluded based on their gender, race/ethnicity, or marital status.

Instruments

Self-administered questionnaires were used to collect data for the study. The questionnaires (attached in Appendices A and B) collected demographic data such as gender, age, employment period and status, and ethnicity, as well as knowledge of fall prevention from the participants. The fall prevention knowledge questionnaire was a 10-item questionnaire that evaluated participants' ability to use the JHFRAT to identify the patients' fall risk.

Procedures

I obtained approval from the relevant authorities. The participants were then conveniently selected from the nurses working in the medical-surgical trauma unit using the inclusion criteria. The individuals who met the inclusion criteria and were selected were informed of the objectives and significance of the study. They then signed the informed consent form to meet the required ethical standards. I then gave them the questionnaires to fill out and return. The completed questionnaires were stored securely to prevent access by third parties. After this, the nursing staff education program was conducted for 4weeks on fall prevention measures and how to use the JHFRAT. The

training was conducted in four sessions of 1hour each. After the training, the participants completed the same questionnaires to indicate their knowledge of fall risk prevention.

Ethical Issues

I followed and met the required ethical standards. For instance, I obtained approval for the study from the relevant institution before starting data collection. The IRB approval process is important in protecting the welfare and rights of study participants while establishing the credibility of research. All participants were provided with information on the study and took part voluntarily, and they signed an informed consent form. Additionally, I maintained the privacy, anonymity, and confidentiality of the study participants and protected the information given against access to third parties to prevent disclosure of the participants. The names of the participants were not indicated in the questionnaires. However, they included their age groups and gender to correlate these demographic details to their knowledge of fall prevention. The age groups were classified as 0-15 years, 16-30 years, 31-45 years, and above 46 years. In addition, the participants indicated their gender and years of service, with the latter in the following categories:< 1 year,1-2 years,3-5years, 6-8years, 9-10years, 11-12years, and >12years. This information permitted the relation of their knowledge on the fall prevention measures and these variables. The filled-in questionnaires were destroyed at the end of the study. Further, I did not harm the participants in any way, and they could withdraw from the study at any time. The filled-in questionnaires were recorded on a password-protected computer, and the hard copies were destroyed.

Analysis and Synthesis

Data obtained from the study participants were analyzed using descriptive statistics that summarized the basic features of the data. Paired student *t* test was used to show whether the nursing education program had a significant effect on the participants' knowledge. A *p*-value of 0.05 was considered important.

Outliers in the data indicate experimental errors. Outliers and missing data are eliminated from data analysis, as these can affect a study's validity. However, there were no outliers in the data analysis, and therefore, no data were eliminated.

Summary

This section indicated the methods used for data collection and analysis and participant sampling from nurses working in a 137-bed unit in Georgia. The data were collected using self-administered questionnaires, and the data were analyzed using various analyses to indicate whether the nursing staff education program increased participants' knowledge on fall prevention.

Section 4: Findings and Recommendations

Introduction

In a Northern Georgia 137-bed rehabilitation center, inpatient falls among the elderly have been increasing, especially in the medical-surgical trauma unit. The nursing staff are unaware of clinical practice guidelines and EBPs related to fall prevention among the elderly. Evidence-based fall prevention programs are multifactorial and multicomponent elements with various strategies. They often have implications for nursing practice, care costs, patient satisfaction, morbidity, mortality, and hospital performance metrics. This DNP project addressed the lack of knowledge on fall prevention among the nursing staff in the local rehabilitation center, which contributed to the high patient falls recorded. The project bridged the nursing gap in practice by providing the nursing staff at the local rehabilitation facility with practical, evidence-based knowledge related to fall prevention. The guiding practice-focused question for this project was the following: Does the nursing staff education program increase knowledge in fall prevention?

A pretest and posttest study were employed in the collection of evidence on the knowledge of falls among the nursing healthcare staff in the rehabilitation center. Self-administered questionnaires were used in the collection of the data, and these were analyzed using descriptive statistics and paired *t* test. A *p*-value of <0.05 was considered significant.

Findings and Implications

Nine nurses who met the inclusion criteria and were willing to take part in the study were included. However, at the start of the study, there were 14 nurses, and five of these dropped out midway during the nursing staff education intervention. The average age of the study participants was 41.5 years. Participants had an average working experience in the medical-surgical trauma unit of 3.7years, and 77.78% were full-time employees. Among the participating nurses, 55.56% had a bachelor's degree, and 66.67% were female. The demographic details of the study participants are indicated in Tables 1-9.

Table 1

Gender

Gender	Frequency	Percentage
Male	3	33.33%
Female	6	66.67%

Table 2

Age Group

Age group	Frequency	Percentage
0-15	0	0
16-30	0	0
31-45	6	66.67%
46+	3	33.33%

Table 3

Ethnicity

Ethnicity	Frequency	Percentage
Caucasian	1	11.11%
African American	1	11.11%
Asian	2	22.22%
Native American	4	44.44%
Native Hawaiian/Pacific Islander	1	11.11%

Table 4

Type of Profession

Type	Frequency	Percentage
Nursing assistant	0	0
Licensed practice nurse	0	0
Registered nurse	9	100%
Advanced practice nurse	0	0

Table 5

Education

Education level	Frequency	Percentage
High school	0	0
Bachelor's degree	5	55.56%
Master's degree	4	44.44%
PhD	0	0
Trade school	0	0

Table 6

Marital Status

Marital status	Frequency	Percentage
Married	4	44.44%
Single	2	22.22%
Divorced	1	11.11%
Widowed	1	11.11%
Separated	1	11.11%

Table 7

Years of Practice

Years of practice	Frequency	Percentage
<1 year	0	0
1-2	1	11.11%
3-5	4	44.44%
6-8	3	33.33%
9-10	1	11.11%
11-12	0	0
>12 years	0	0

Table 8

Employment Status

Employment status	Frequency	Percentage
Fulltime	7	77.78%
Parttime	2	22.22%
Perdiem	0	0
Traveling nurse	0	0

Table 9

Language

Language	Frequency	Percentage
English	9	99.99%
Spanish	4	44.44%
Portuguese	0	0
French	2	22.22%
Mandarin	2	22.22%
Arabic	0	0

In the pretest, the data showed moderate fall prevention knowledge, as summarized in Table 10. However, these improvements in the posttest after the nursing education program highlighted the continued need for fall prevention education and the use of the JHFRAT in the fall risk classification of the patients.

Table 10

Data From the Pretest and Posttest

Item	Pretest answers	Posttest answers
1. Global health concerns of increased length of hospital stay	Eight (88.89%) correct answers One (11.11%) wrong	Nine (100%) correct answers
2. Places older patients are likely to fall	Nine (100%) correct answers	Nine (100%) correct answers
3. Fall risk factors	Six (66.67%) correct answers Three (33.37%) wrong answers	Eight (88.89%) correct answers One (11.11%) wrong answer
4. Professionals involved in fall prevention	Nine (100%) correct answers	Nine (100%) correct answers
5. Effects of falls on patients and their outcomes	Seven (77.78%) correct answers Two (22.22%) did not indicate how falls affected patient outcomes	Nine (100%) correct answers
6. JHFRAT	Six (66.67%) correct answers Three (33.33%) wrong answers	Nine (100%) correct answers
7. Patient factors evaluated by the JHFRAT	Four (44.44%) correct answers Five (55.56%) wrong answers	Nine (100%) correct answers
8. Correct fall risk classification of patients	Seven (77.78%) correct answers Two (22.22%) wrong answers	Nine (100%) correct answers
9. Regularity of nursing fall risk assessment	Five (55.56%) indicated fall risk assessment of once a week Four (44.44%) indicated everyday fall risk assessment	Nine (100%) indicated regular fall risk assessment
10. Fall prevention measures that can be undertaken	Eight (88.89%) correct answers One (11.11%) wrong answer	Nine (100%) correct answers

The descriptive statistics on the pretest and posttest results indicate an improved

level of knowledge in the medical-surgical unit in the rehabilitation center in Georgia.

Table 11

t Test Results

Item	Pretest correct	Posttest correct		
1	88.89	100		
2	100	100	*t*-test paired	
3	66.67	88.89	0.003773063	
4	100	100		
5	77.78	100		
6	66.67	100		
7	44.44	100		
8	77.78	100		
9	55.56	100		
10	88.89	100		
n= 9				
M	76.668	98.889	*t*-test (unpaired)	
			0.001514994	

The student *t*-test showed a *p* value of 0.0038. This is smaller than 0.05 and is

therefore statistically significant. The specific questions that demonstrated significance of

the nursing education program were the questions that evaluated the patient factors

assessed by the JHFRAT, how regularly the fall risk assessments should be conducted on

the patients, what the JHFRAT is and its use, and the factors that increase the fall risk of

the patients.

These findings imply that nursing education programs increase the knowledge of

the healthcare staff and the use of fall risk assessment tools. However, more studies that

indicate whether the nursing education program reduces patient falls in the rehabilitation

center are required. Another implication of the findings is that the knowledge of the

nurses on the use of the JHFRAT is minimal, and they require future nursing education programs to enhance their understanding of the tools and accurate classification of patients.

A potential and unanticipated limitation of the project was the enrolment of a small number of nursing staff in the project, as this limited the generalizability and transferability of the results. Another potential limitation was poor attendance of the nursing staff education programs intended to enhance knowledge on fall prevention or limited time for the program due to the busy schedules of the nursing staff. Additionally, data on the knowledge and skills of the nursing staff were collected using questionnaires, and a potential limitation of this was misinterpretation of the questions and the risk of dishonest answers that would affect the validity of the project.

Potential social implications of the results, despite the low participant turnout in the study, include increased knowledge related to the STEADI and the use of the JHFRAT. These are important, as they will contribute to reduced patient falls and healthcare-associated costs and improved patient outcomes and quality of life. Moreover, the increased knowledge among the nurses in the rehabilitation center may result in reduction in fall-related complications. In addition, reduction in falls may reduce emergency department visits.

Recommendations

This DNP project's findings support a recommendation for continued training of nursing staff in the care and assessment of patients' fall risk in the rehabilitation, surgical, medical, and psychology units. According to their risk, the correct classification of the

patients will ensure adequate patient care, and measures to prevent potential falls can be individualized. These measures are patient-related, healthcare-related, or environmental factors. The measures include increased nursing staff and hourly rounding to assist high-risk patients, strength- and gait-enhancing exercises, decluttering of patients' spaces, walking aids, and enhancing poor light areas.

This project also supports a recommendation to use the JHFRAT to indicate the fall risk of the patients. The JHFRAT evaluates eight main areas that indicate risk of falls, including the patient's age, fall history, medication used, care equipment, mobility, and cognition. A score of >6 or <13 indicates an intermediate fall risk, while >13 scores represent high fall risk. The classification of the patients will enable the implementation of multifactorial interventions to reduce their fall risk. However, the nursing staff may also require education on the appropriate fall prevention measures to implement and individualize these for high-risk patients.

The project also supports a recommendation for the promotion of behavioral and attitudinal change among care providers. Markedly, nurses' knowledge of patient falls is positively correlated with their experience of inpatient falls, and their attitudes regarding falls are significantly influenced by their fall prevention education (Cho & Jang, 2020). Therefore, it is important to increase knowledge among the nursing staff that falls among rehabilitated or hospitalized elderly patients are preventable, as well asto increase the nursing staff's knowledge about correct fall risk assessment/prediction. Further, the nursing staff should be enrolled in education programs that increase their use of the

specific fall risk assessment tools and their psychometric properties, including sensitivity, specificity, positive predictive, and negative predictive values.

Contribution of the Doctoral Project Team

The DNP project team at the rehabilitation center included the nursing staff and the nursing administrator, senior nursing educator, unit manager, and physical therapist. Their role in the project was to assist with the planning and implementation of the fall prevention educational program. The nursing staff at the rehabilitation center medical-surgical unit were involved in indicating their knowledge of the residents' fall risk assessment and evaluation. They answered the questionnaires on the fall risk assessment tools, pre and post enrollment in the staff education programs that sought to increase their knowledge in fall prevention. Their role was to attend the training programs as scheduled and take part in evaluating the project. The administrators and the nursing educators, unit managers, and physical therapists were involved in providing the required materials for the project, such as training rooms, computers, pens, writing sheets/pads, and projectors. In addition, the nursing administrator was involved in the assessment of the suitability of the project in the rehabilitation center. Further, they set the timelines of the project, and the senior nurse educator assisted in scheduling and coordinating the staff in attending the training. The whole doctoral project team was involved in indicating the effectiveness of the nursing staff education program, and their overall interest was in reducing the number of falls within the rehabilitation center. The senior nurse educator was also involved as a content expert, assisting in educating the nursing staff on fall prevention and use of the JHFRAT and overseeing the project while informing the administrators of its progress.

The nursing team will be involved in the future approval of recommended policies or practices, such as continued education of the nursing staff to improve their knowledge and skills in fall prevention and other organizational changes such as increased staffing and nursing hourly rounding.

There are plans to extend the project. These include evaluating the correct use of the JHFRAT in the fall risk assessment of the patients and whether the nursing education program led to reduced incidence of falls.

Strengths and Limitations of the Project

The strength of the project is that it provided evidence that nursing education programs improve nurses' knowledge on fall prevention and the use of the JHFRAT. The study population was the nurses in the medical-surgical unit. Therefore, the findings of this study add to the available literature on falls among patients in rehabilitation care units.

An unanticipated limitation was the small study population of only nine nurses. This significantly reduced generalizability and transferability. The busy schedule of the nurses in the unit was expected to affect the enrollment of participants in the study. However, I had intended to work with the nurses' schedules and conduct the nursing education program within their free time. Additionally, the questionnaires used for data collection took less than 10 minutes to fill. For these reasons, the low study population enrollment was unexpected. Another unexpected limitation of the study was the dropout of five nurses who were initially part of the study and had attended a few sessions of the education program. The missing data were eliminated from the data analysis.

Further, this project did not indicate the effects of the nursing education program on patient fall incidence in the rehabilitation unit by comparing fall rates before and after the education program. This did not enable the indication of the nursing education program on the incidence of falls and their causes and effects. Moreover, the study follow-up period was not long enough to determine whether the use of the JHFRAT was according to recommendations and whether the education program altered the nurses' actions in any way. Another limitation of this study was that the questionnaires were self-administered, and I did not evaluate the honesty in the answers given, presenting a potential bias that may affect the validity of the results.

Section 5: Dissemination Plan

The results of the project were disseminated to the administrators, nursing staff,

and director of nursing of the local rehabilitation center where the education was done.

The doctoral teams were the stakeholders of the project and were involved from its

inception to completion. They were therefore informed of the developments, progression,

and results of the project. The presentations to the stakeholders on the project results and

recommendations that can be implemented to reduce patient falls were held in large

halls/rooms. All participants were given the opportunity to ask questions and give their

concerns and recommendations. The recommendations included addressing hospital-

related factors, patient-related factors, and environmental factors that are risks to the

patients.

Markedly, the dissemination of the project results is important for the uptake of

the recommendations, and in this case, in the continued use of valid and reliable fall risk

prevention assessment tools and policy and practice changes such as increased staffing

and hourly rounding. These results were disseminated to the nurses using posters and

presentations. The posters were designed graphically to be eye-catching and informative

and included both graphical and textual elements. They contained brief information on

the project, results, and recommendations.

I also intends to publish reports on various websites and peer-reviewed journals to

indicate that the nursing staff education programs increase knowledge of fall prevention

among patients. These publications will follow the outlines given by the specific websites

and journals and reach a wider audience in the nursing profession than the stakeholders involved in the project.

Analysis of Self

Patient falls are a global healthcare concern, as they result in injuries and deaths of patients. This DNP project focused on reducing falls of patients within a local rehabilitation center in Northern Georgia that had experienced an increased incidence of falls. This DNP project was guided by the following question: Does the nursing staff education program increase knowledge in fall prevention? My role in this project as an educator involved educating the nursing staff at the rehabilitation facility on the importance of nurse training and the use of the JHFRAT to assess the fall risk of the patients. I used my formal coursework training in pedagogy to prepare and deliver didactic content with input from different experts. In addition, I prepared for my role as an educator by collecting evidence from different sources and extracting and appraising it. Further, I assumed the roles of facilitator and change agent, as I facilitated the planning, implementation, and evaluation of the effectiveness of the nursing education program in reducing patient falls. However, I noted that some of the nursing staff in the medical-surgical unit were unwilling to take part in the study due to concerns of privacy and confidentiality of their information. Despite the indication of how I would protect their information and details from access by third parties, the turnout to attend classes was still low.

Nonetheless, the project and its results indicated how nursing staff education programs can improve nurses' knowledge of fall prevention. In addition, the

recommendation on how the nurses can use of fall risk assessment tools to increases their knowledge. Increased knowledge can influence the incidence of falls in rehabilitation and long-term care units. As a result of this insight and having read on the importance of EBPs in the prevention of patient falls, I now advocate for the implementation of these practices.

<div align="center">**Summary**</div>

The incidence of falls among the elderly and patients with mental or medical issues is increasing. This DNP project focused on a 137-bed local rehabilitation center in Northern Georgia. The nursing staff at this facility were unaware of current CPGs related to fall prevention. They were not practicing the latest EBPs. This contributed to increased patient falls rates. The project evaluated was a nursing staff education program to enhance the staff's knowledge of fall prevention. The findings indicated that nursing training is effective in increasing the knowledge and skills of the nursing staff in reducing falls. The categorization of the patients will enable the implementation or individualization of measures that prevent patient falls, such as increased nursing staffing and hourly rounding; use of exercises to increase strength, gait, and balance; and decluttering of the patients' spaces. Therefore, nursing training is important in increasing the knowledge of the nursing team on fall prevention, reducing patient falls, and enhancing their outcomes.

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Appendix A: Fall Prevention Pretest/Posttest

1.   Name one of the serious global health concerns associated with increased length of
      stay and re-admissions, which leads to adverse consequences?
      A.   UTI
      B.   Fall
      C.   Sleep apnea
      D.   Do not know.

2.   Where the highest place older patient is are likely to fall?
      A.   Home
      B.   Office
      C.   Hospital
      D.   Park
      E.   Do not know.

3.   What are fall risk factors? Give examples?
      A.   Bed and chair alarms
      B.   Call light
      C.   Nurse-to-patient ratio
      D.   Knowledge deficit
      E.   Slippery floors,
      F.   Clutter
      G.   Aging
      H.   Do not know.

4.   Which professionals might be involved in fall prevention?
      A.   Nurses' team
      B.   Carpenter
      C.   Barber
      D.   Physical therapy
      E.   Occupational therapy

5.   What is the Johns Hopkins fall risk assessment tool (JHFRAT)?
      A.   To help identify at-risk for fall patients aged 65 and over.
      B.   To help identify at-risk for pain patients aged 12 to 15.
      C.   To help identify at-risk for cancer patients aged 55 to 60.

6.   What are some fall prevention measures?
      A. Hourly rounding
      B. Communication
      C. Toileting
      D. Medicating
      E. Do not know.

7.   What are some interventions to help prevent patient falls?
      A.   Communication.
      B.   Medicating
      C.   Toileting
      D.   Environment
      E.   Do not know.

8. Which procedure among the outlined ones below is not appropriate an assessment procedure for patient classification
    A. Number of previous falls
    B. Wearable data
    C. Resident assessment instrument home care data
    D. Physical activity measurements
    E. Size of the limbs
    F. Heart rate measurements

9. Which of the assessment below is not considered a regular fall risk assessment on an elderly patient?
    A. One a week
    B. Four times a week
    C. Every day of the week
    D. Six times a week
    E. More than once in a day

10. One of the statements below does not mention a fall prevention measure. Identify the statement.
    A. Begin a fall prevention plan with the doctor
    B. Keep moving, physical activity leads to fall prevention.
    C. Wear sensible shoes
    D. Use assistive devices
    E. Light up the walking spaces
    F. Always put on socks

Appendix B:Demographics Questions

1. Gender

What gender are you going to register as?

A. Male
B. Female
C. _____ (Short Answer Space)
D. Prefer not to answer.

2. Age

What is your age here?

A. 0 - 15 years old
B. 16 - 30 years old
C. 31 - 45 years old
D. 46+
E. Prefer not to answer.

3. Ethnicity

Kindly state your ethnicity.

A. Caucasian
B. African American
C. Latino or Hispanic
D. Asian
E. Native American
F. Native Hawaiian or Pacific Islander
G. Two or More
H. Other/Unknown
I. Prefer not to answer.

4. Type of professional/ nurse

What are your career fields?

A. Nursing Assistant
B. Licensed Practical Nurse
C. Registered Nurse

D. Advanced Practice Nurse

E. Other: _____

5. Education

What is the highest education degree or standard that you have completed?

A. High School

B. Bachelor's Degree

C. Master's Degree

D. Ph.D.

E. Trade School

6. Marital Status

What is your marital status?

A. Married

B. Single

C. Divorced.

D. Widow

E. Separated

7. Years of practice

How many years have you been in practice?

A. Less than one year

B. 1-2 years

C. 3 – 5 years

D.   6-8 years

E.   9- 10 years

F.   11 – 12 years

G.   Greater than 12 years

8. Employment

What is your present state of employment?

A. Full-Time

B. Part-Time

C. Pier Diem

D. Traveling Nurse

E. Prefer not to say.

9. Language

What languages are you capable of fluently speaking? (Check all available options)
A. English
B. Spanish
C. Portuguese
D. French
E. Mandarin
F. Arabic
G. Other
H. Prefer not to answer.