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Nursing Staff Education Fall Prevention Program at a Skilled Nursing Facility

Solomon Lomo
Walden University

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Walden University

College of Nursing

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Solomon Lomo

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Walden University

2021

Abstract

Nursing Staff Education Fall Prevention Program at a Skilled Nursing Facility

by

Solomon Lomo

MS, Walden University 2015

BA, University of Ghana 2004

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

Walden University

June, 2021

Abstract

Falls have negative effects on the confidence, function, and quality of life in older adults and are major cause of injury and death among this population. The quality assurance report in a long-term care facility identified an average of 10 falls per week in the last quarter of 2017. The facility has a person-centered policy, which creates fall prevention challenges when usual fall protective practices are prohibited. The purpose of this education program was to educate staff nurses working with patients in a long-term care facility on additional evidenced based practices to prevent falls and injuries without compromising the person-centered policy. The staff education program was developed from a falls management program adapted by The Agency for Healthcare Research and Quality. Knowles' adult education model guided the development of the program. Eighteen staff nurses participated in the education program. The nurses completed a pretest prior to participating in the fall prevention program and a posttest after completing the program. Fourteen out of the 18 staff nurses who participated in the evidence-based program scored above average, between 80 and 100 points in the pretest. The mean for the pretest was 83 as compared to 100 in the posttest. This outcome provides an insight into the gap in practice for fall prevention. Recommendations included the need to establish consistency in fall prevention education through periodic training of all staff nurses to reinforce evidence-based fall prevention practices. This project underscores the importance of educating staff nurses about strategies that have the potential for fall prevention. Reducing or preventing falls in long term care will improve the quality of life and functionality of the residents and increase their independence.

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Section 1: Nature of the Project

Falls pose a serious risk to many Americans, especially those who are older or institutionalized. The Centers for Disease Control and Prevention (CDC, 2019) estimated that one in four older persons fall each year. The risk for falls increases among older adults and especially for those with a history of falls (CDC, 2019). About 800,000 patients are hospitalized each year for fall-related injuries, such as hip fractures and head injuries (CDC, 2019).

Falls have negative effects on the confidence, function, and quality of life in older adults and are major causes of injury and death among this population (CDC, 2019). Reducing or preventing falls in long-term care will improve the quality of life and functionality of the residents, promote independence, and result in financial benefits for the residents, facility, community, and healthcare industry (CDC, 2019). Nursing staff spend a significant amount of time with the residents; therefore, educating them would empower them to transform evidence-based fall prevention strategies into practice (Leverenz & Lape, 2018). The skills acquired through fall prevention training may add to their knowledge base.

Problem Statement

Falls are major causes of injury among the older adult population in the United States. The Joint Commission (2017) indicated that there have been substantial gains on fall prevention made by healthcare organizations through evidence-based practice; however, sustaining the success long term has been a problem. Factors such as lack of communication and noncompliance to fall risk assessment safety protocols have hindered efforts to reduce the number of falls in U.S. healthcare facilities (Joint Commission, 2017).

Nursing facilities admit residents with different diagnoses, conditions, and disease processes. It is a common practice for these facilities to use fall risk assessment and universal fall protocols upon admission. This includes orienting the resident to the environment, placing a call light within reach, and educating residents on its use, keeping personal items within reach, and ensuring that the living area is clutter free with adequate lighting at night (Agency for Healthcare Research and Quality [AHRQ], 2017). Although these precautions are evidence based, they are not necessarily applicable in all situations, given the diversity of the resident population (Vlaeyen et al., 2015). For example, residents with declined cognition may have the stamina for ambulating and completing activities of daily living; however, they may lack the insight to complete activities of daily living s safely.

Translating evidence into practice is often a challenge in the fall prevention process, which requires educating healthcare providers on the application of evidence-based fall assessment and prevention tools (AHRQ, 2017). Falls result from inadequate fall risks assessment, nonadherence to fall and safety protocols, breakdowns in communication among staff, and environmental safety risks (Joint Commission, 2017). Inadequate staff training and supervision, as well as the inability of leadership to direct and sustain fall prevention programs, are also contributing factors to falls (Joint Commission, 2017).

The facility that was the site for this project study is located in the Midwest region of the United States and provides skilled nursing, rehabilitation, hospice, respite, and memory-care services to residents in the facility. The quality assurance report identified that the facility experienced an average of 10 falls per week in the last quarter of 2017, with a majority of the cases being recurrent.

The facility has a person-centered policy, which prevents the use of fall interventions such as motion sensors, bed rails, and bed and chair alarms. Person centered care is an approach in which healthcare providers incorporate the goals, values, and preferences of individual patients and their families into the healthcare delivery and decision-making process for better outcomes (World Health Organization [WHO], 2021). This person-centered policy enhances the star rating system from the Centers for Medicare and Medicaid Services (CMS), a public reporting system through the Nursing Home Compare website. For example, absence of physical restraints for long-term residents meets the quality measure requirements of the CMS and yields 100 points towards the star rating (CMS, 2021). However, this policy creates fall prevention challenges when usual fall-protective practices are prohibited. It is therefore important that staff nurses are educated on additional evidence-based practices to prevent falls and injuries in this environment without compromising the person-centered policy.

The facility has an advanced therapy department that specializes in orthopedic and stroke recovery. The center receives referrals for residents with declined functionality. The therapy department also runs a restorative program to maintain the functionality of residents. The nursing staff spends the most time with the residents. Educating the staff will enable them to recognize residents who will benefit from referrals to the therapy department for reconditioning, which has the potential to increase the residents' stamina and functionality and decrease their risk for falls.

Purpose Statement

The purpose of this project was to educate nurses in a skilled nursing facility about evidence-based practices to prevent falls and injuries for the residents. Factors identified for the ineffectiveness of fall prevention programs are inadequate fall risks assessment and education

about fall prevention programs (Joint Commission, 2017). To address the problem, I administered a staff education program to help nurses identify residents at risk for falls and educate the nurses about evidence-based interventions they can use for fall prevention. The practice-focused question was:

PFQ: Will a staff education program that focuses on evidence-based preventive measures and identification of specific needs of residents at risk for falls increase nursing staff knowledge of measures to decrease patient falls in a skilled nursing facility?

Providing staff education to promote patient safety meets Essential II of the American Association of Colleges of Nursing (AACN) Essentials of Doctoral Education for Advanced Nursing Practice (Garritano et al., 2016). This Essential requires the initiation of quality improvement within the organization to ensure positive outcomes for the patients. The development of an evidence-based fall prevention program for residents will equip nurses with the knowledge to implement specific patient-focused plans of care for the geriatric residents in the facility.

Nature of the Doctoral Project

I gathered evidence for the staff education program from primary and secondary sources, as recommended by Polit and Beck (2017). I collected reliable fall prevention data and evidence from reputable agencies such the CDC, The Joint Commission, AHRQ, and the Institute for Healthcare Improvement. I used the electronic databases of Walden University Library to retrieve peer-reviewed evidence-based fall prevention literature from the Cumulative Index to Nursing and Allied Health Literature (CINAHL), Education Resources Information Center (ERIC), and Index Medicus, among others. I used keywords such as *fall prevention*, *geriatric*

falls, evidence-based fall interventions, fall prevention in long-term/ extended care, and staff education to elicit evidence-based literature for the project. I used the synthesis matrix to collate and analyze all the evidence from the various sources (see Clark & Buckley, 2017).

The purpose of the doctoral project was to develop a staff education program to educate staff nurses about fall prevention strategies based on identified gaps in practice to address a high incidence of falls. The project was also intended to promote safety and improve the quality of life of the residents without compromising person-centered care or quality measures. I developed the staff education program into a PowerPoint presentation from an AHRQ Falls Management Program. A pretest was administered before the presentation of the program and a posttest afterwards. I analyzed the results of the pre-/posttest using Microsoft Excel, with a focus on percentages to determine if there was an improvement in the nurses' knowledge after participating in the educational program.

Significance

I gathered evidence for the staff education program from primary and secondary sources, as recommended by Polit and Beck (2017). I collected reliable fall prevention data and evidence from reputable agencies such the CDC, The Joint Commission, AHRQ, and the Institute for Healthcare Improvement. I used the electronic databases of Walden University Library to retrieve peer-reviewed evidence-based fall prevention literature from databases such as the Cumulative Index to Nursing and Allied Health Literature (CINAHL), Education Resources Information Center (ERIC), and Index Medicus, among others. I used keywords such as *fall prevention, geriatric falls, evidence-based fall interventions, fall prevention in long-term/*

extended care, and *staff education* to elicit evidence-based literature for the project. I also used the synthesis matrix to collate and analyze all the evidence from the various sources.

The purpose of the doctoral project was to develop a staff education program to educate staff nurses about fall prevention strategies based on identified gaps in practice, to address high incidence of falls. The project was intended to be used to promote safety and improve the quality of life of the residents of the facility without compromising person-centered care or quality measures. The staff education module was delivered in the form of a PowerPoint presentation based on a revised AHRQ Falls Management Program. A pretest was administered before the power point presentation and a posttest afterwards. I analyzed the results of the pre/posttest using Microsoft Excel, with a focus on percentages to determine if nurses' knowledge of fall prevention improved after participating in the educational program.

Summary

Falls are preventable incidents yet they occur frequently in various healthcare settings (AHRQ, 2017). Educating staff on evidence-based fall prevention is beneficial to reduce the incidence of falls (AHRQ, 2017). The purpose of the project was to determine whether a staff education program would improve staff nurses' knowledge about fall prevention for residents in a long-term rehabilitation nursing facility. I gathered evidence for the project from both primary and secondary sources and organized evidence using the synthesis matrix. I used the evidence to develop an evidence-based fall prevention education program. The literature supports a comprehensive fall prevention approach, which involves engaging all stakeholders, particularly staff nurses, to ensure positive outcomes (Leverenz & Lape, 2018). Educating staff nurses to implement successful fall prevention programs has the potential to decrease falls, improve

patients' outcomes, and decrease financial costs to the facility. In Section 2, I focus on the theoretical models associated with the project, the benefits of the project to nursing practice, the local background, and my role in addressing the problem.

Section 2: Background and Context

Introduction

The National Council on Aging (2021) noted that falls are not part of regular aging; however, the evidence indicated that falls are a major health issue among older adults ages 65 and older in the United States. Older adults in long-term care experience about 424,000 fatal falls each year (Aliu, 2017). This project was an attempt to address falls in a 110-bed skilled nursing facility by educating staff nurses to identify risk factors and implement evidence-based fall prevention interventions. The practice-focused question for the project was as follows:

PFQ: Will a staff education program that focuses on evidence-based preventive measures and identification of specific needs of residents at risk for falls increase nursing staff knowledge of measures to decrease patient falls in a skilled nursing facility?

In Section 2, I discuss the model that guided the evidence-based project, the relevance of the project to nursing practice, the local background of the project, my role as the DNP student, and the project team.

Concepts, Models, and Theories

Researchers recommend the use of theory to guide practice, collect evidence, and select appropriate interventions in evidence-based projects (Lor et al., 2017). The gaps in practice identified in the project suggested that the nursing staff would benefit from a fall prevention education program. The evidence-based project was guided by Knowles's theory of adult learning. Knowles identified distinct characteristics of adult learners that were different from those of children (iSpring Solutions, 2016). Knowles used the term andragogy to describe the theory and made five assumptions about the way adults learn (iSpring Solutions, 2016). The

theory of adult learning provided the framework for the development of this evidence-based project. Table 1 includes the five assumptions of the theory and how they related to this project.

Table 1

Knowles's Theory of Adult Learning Application to Project

Theory of adult learning five assumptions	Application of the model to the project
Adults are self-directed in their learning.	Participants were presented with the goals of the project, encouraged to ask questions and guided to direct the process.
Adults draw from their experience and memory as they learn.	Participants were encouraged to share experiences that have either helped or hindered fall prevention interventions.
Adults are willing to learn material that enhances their professional development.	Falls are important to the safety of both the patients and the employees.
Adult learning is problem focused.	Participants identified the project as a way to address the fall problem
Adults are internally motivated to learn.	The nurses were motivated to learn, because they understood the importance of decreasing the fall risk for their patients.

Note. Adapted from iSpring Solutions (2016). *What Does Malcolm Knowles Know About Adult Learning Theory?* Ispring. <https://www.ispringsolutions.com/blog/what-does-malcolm-knowles-know-about-adult-learning-theory/>

The theory of adult learning suggests that adults are self-directed in their learning (iSpring Solutions, 2016). It is important to understand the perspectives of the learner, which was achieved in this project through highlighting the goals of the evidence-based project and guiding the nurses to direct the process (see Zipp et al., 2017). The nurses were invited to the program and were encouraged to ask questions.

Andragogy assumes that adults draw from their experience and memory as they learn (iSpring Solutions, 2016). These experiences may enhance or hinder the learning process and the learners' ability to accept change or new concepts (Lee & Daugherty, 2016; Mothokoa & Maritz, 2018). I asked the nurses to share experiences that have either helped or hindered fall prevention. I developed teaching and learning plans and outcomes based on the nurses' positive experiences.

The theory of andragogy also suggests that adults are willing to learn material that enhances their professional development (iSpring Solutions, 2016). I guided the nurses to identify that the knowledge and skills they acquire from the evidence-based project would help them decrease falls and improve quality of life for residents.

Adult learning is problem focused; therefore, the fall prevention education program was presented to suit the healthcare delivery and daily practice at the facility (see Warburton et al., 2016). In addition, as a gerontology nurse practitioner with extensive long-term care experience, I applied my expertise on the subject to highlight the problem and guided the staff nurses to identify solutions to the problem. Knowles asserted that adults are motivated to learn by internal and external factors (iSpring Solutions, 2016). According to Lee and Daugherty (2016), ethical dilemmas presented in healthcare delivery render the affective domain an important area of attention for healthcare providers. Emphasis on the benefits of fall prevention, such as residents'

safety and well-being, as well as career fulfillment and work ethics for nurses, promoted effective teaching and learning.

Relevance to Nursing Practice

Falls are common occurrences in healthcare and, as a result, attract a lot of attention from the research community. Despite the efforts by researchers to curb the problem, fall prevention remains one of the complex tasks to undertake and sustain in healthcare (Joint Commission, 2017). The incidence of falls is higher among older persons, and particularly among residents of long-term care facilities (AHRQ, 2017). Educating geriatric nursing staff on evidence-based fall prevention protocols has the potential to add to the standard of care for geriatric patients and to contribute to geriatric safety knowledge.

Skilled nursing facilities use standard fall protocols intended to prevent or reduce falls among residents. These protocols include interventions such as night-lights, clutter-free floors and walkways, and easy access to call lights and frequently used items such as cups, remotes, and phones (AHRQ, 2017). However, the diversity of the resident population in skilled nursing facilities sometimes hinders the application of fall prevention protocols, which calls for a complementary approach to address the problem (Joint Commission, 2017). The problem may also be adversely affected by poor communication and risk assessments (Joint Commission, 2017). Periodic education and updating the nursing staff on standards of practice and current evidence of fall prevention helps to address the problem (Hang et al., 2016). The evidence-based project has the potential to develop staff proficiency and promote optimal outcomes in fall prevention (AHRQ, 2017). The leadership of the facility was committed to the project and was instrumental in the process.

The CDC's Stopping Elderly Accidents, Deaths, and Injuries (STEADI) initiative provides healthcare providers with educational resources that are helpful in fall prevention. Among other things, the STEADI initiative acknowledges the benefits of staff education in fall prevention. The STEADI initiative also equips healthcare providers with educational materials that focus on screening, assessment, and interventions to promote fall prevention among the older adult population (CDC, 2020). The AHRQ (2017) also has staff education guidelines developed by experts for fall prevention that was modified and used in the project.

Local Background and Context

The city statistics of 2017 showed that the project site was in a community with a population of about 31,000, with 88.5% European American, 3% African American, 2.3% Hispanic, 5.6% Asian American, 1.9% mixed race, and 0.8% other race. The facility provides services such as skilled nursing, post-acute rehabilitation, long-term care, and memory care, and is part of a larger corporation with 35 facilities in the Midwest region of the United States. The facility population consists of about 77% females and 23% males ages 60 years or older.

The State Department of Health estimated that there was a 202% increase in falls among older adults between 2000 and 2015 costing a state in the Midwest about \$1.1 billion each year. The statistics indicated that there were 101,896 falls among seniors 65 years and older in 2014, 81,275 of which required emergency room visits, 19,461 required hospitalization, and 1,160 resulted in death. In 2015, the department indicated that 25% of all fall-related deaths occurred in residential facilities. It was therefore imperative for the nursing staff to be educated on the effects and prevention of falls.

The evidence-based project was designed for a 110-bed skilled nursing facility, which experienced an average of 10 falls per week that threatened the quality measures of the facility. The CMS (2019) evaluated nursing homes using a Value Based Purchasing performance-based program; participating nursing homes receive incentives for high performance. The facility had an interdisciplinary safety team that met weekly to discuss falls and other safety issues in the facility. The team used evidence-based fall interventions to address each fall; however, the high number of falls was an indication that staff needed to be educated on translating the evidence into practice.

My observations of the daily activities at the facility helped me to identify gaps in fall prevention protocols and procedures (see Kettner et al., 2017). I interacted with the staff of the facility and realized that the fall prevention process had been hindered by person-centered protocols, which prevented the use of fall interventions such as bedrails, motion cameras, chair and bed alarms, and seat belts. The staff explained that the policy promoted independence among residents by allowing the use of area rugs, coffeepots, and other household items, which may sometimes increase fall risk, especially among residents with decline in cognition.

The staff members were not aware of preventive measures that they could implement to prevent falls without compromising the person-centered care policy. I therefore developed an education program to increase staff knowledge on evidence-based fall prevention methods. I shared this plan with administration, and they agreed that the goal would increase the staff's knowledge about evidence-based fall preventative measures (see Kiyoshi-Teo et al., 2017). The evidence-based project was intended to address falls without compromising person-centered protocols. This was possible by educating staff on fall risk factors and negative effects on falls,

as well as the complexities and benefits of fall prevention. The following practice-focused question guided the project:

PFQ: Will a staff education program that focuses on evidence-based preventive measures and identification of specific needs of residents at risk for falls increase nursing staff knowledge of measures to decrease patient falls in a skilled nursing facility?

Role of the Doctor of Nursing Practice Student

The project provided me the opportunity, as an adult gerontology nurse practitioner, to promote safety by educating nurses about evidence-based interventions to reduce or prevent falls among older persons. The process also resulted in interdisciplinary collaboration to address a common geriatric problem to improve quality of life while contributing to nursing knowledge and improving geriatric nursing. As a nurse leader, I assumed the responsibility of sifting through the evidence, leading the project, and involving all stakeholders in the process. During my practicum experience at the facility, I observed staff activities and the application of fall interventions by the interdisciplinary safety team, and how they affected fall prevention. My motivation for the project was twofold: to make a difference in the lives of the residents at the facility and to improve the knowledge of the nursing staff related to fall-prevention. In addition, the project enabled me to give back to the facility that granted me access to achieve the required practicum to complete my DNP. I did not have any biases that prevented me from implementing this project objectively.

Summary

The evidence-based project was designed to address falls at a skilled nursing facility in Midwest United States. The facility averaged about 10 falls per week, which threatened quality

measures and facility ratings (see CMS, 2017). The literature identified staff education as a viable means by which falls may be addressed. Staff education enhances the application of evidence-based fall prevention strategies, promotes understanding of the risk factors and effects of fall prevention, and changes the negative perception of fall prevention programs (Ayton et al., 2017). To ensure an effective staff education process, I used Knowles's theory of adult learning to guide the evidence-based project. Knowles's theory was used to explain how the characteristics of adult learning may be applied to impart knowledge of fall prevention processes and interventions. The project helped me to apply the leadership skills that I acquired in the DNP training process to develop and implement this project. In Section 3, I present the plan for the development, implementation, and evaluation of the education program, as well as data analysis from the evaluation process.

Section 3: Collection and Analysis of Evidence

Introduction

Healthcare patient falls are a global concern that have negative effects on individuals, the healthcare industry, and nations. There are about 37.3 million falls experienced by individuals annually worldwide, 646,000 of which result in death (WHO, 2018). About 35% of falls in the United States result in injuries, which often extends hospital stays (Joint Commission, 2017). The United States spends about 50 billion dollars annually on fall related injuries, which includes fractures and traumatic brain injuries (CDC, 2019).

My goal for this project was to address the fall problem at a skilled nursing facility guided by Malcolm Knowles's adult education theory to educate nursing staff about evidence-based fall prevention strategies. In Section 3, I discuss the practice-focused question, collection of evidence, and analysis of evidence and their relationship with the evidence-based project.

Practice-Focused Question

Falls are not part of regular aging; however, the evidence indicates that falls are a major health issue among adults aged 65 and older in the United States (National Council on Aging, 2021). The evidence-based project was intended to take place at a 110-bed skilled nursing facility, in the Midwest region of the United States. About 10 falls occurred at the facility each week, which has affected the quality measures of the facility. The purpose of the project was to educate staff nurses at the facility about fall prevention to help decrease the prevailing fall problem at the facility.

The practice-focused question for this project was:

PFQ: Will a staff education program that focuses on evidence-based preventive measures and identification of specific needs of residents at risk for falls increase nursing staff knowledge of measures to decrease patient falls in a skilled nursing facility?

About 424,000 fatal falls occur in the United States in long-term care settings (Aliu, 2017). Evidence-based practice has resulted in positive outcomes; however, it has been a challenge to sustain most of these fall prevention programs (Joint Commission, 2017). Ineffective fall prevention programs have been associated with inadequate fall risks assessment, nonadherence to fall and safety protocols, breaks in pertinent fall-related communication, environmental safety risks, and inadequate staff training and supervision, among other issues (Joint Commission, 2017). In the course of this evidence-based project, I identified inadequate application of fall prevention strategies by staff nurses as an underlying gap in practice. Educating the nursing staff was intended to make them proactive in the fall prevention process, with the potential to reduce the number of falls at the facility.

Sources of Evidence

I used the Walden University Library to investigate resources for the evidenced-based project. I used the following databases for this project: CINAHL Plus with Full Text, Education Source, MEDLINE, Ovid, ProQuest Nursing and Allied Health Source. In addition, I also used the websites of reputable agencies such as the AHRQ, the CDC, the CMS, and the WHO. I gathered peer reviewed literature, most of which was published within 5 years of 2021. I collected data from the facility as well as observation and interaction with staff nurses. I used the following keywords to search for sources: *fall prevention, geriatric falls, nursing home falls, evidence-based fall interventions, staff education and fall prevention, Malcolm Knowles model*

and fall prevention, and *andragogy and fall prevention*. These terms yielded over 6,200 articles, out of which 78 were deemed appropriate for the project. I used a matrix synthesis to collate and organize all the data collected for the project.

The purpose of the project was primarily to educate staff nurses on the strategies and application of evidence-based fall interventions to prevent or reduce falls in a skilled nursing facility. The evidence collected for the project was derived from reputable sources, some of which have been developed into fall prevention guidelines by agencies such as the CDC, AHRQ, CMS, and the Joint Commission among others. The evidence obtained from the review of literature provided me with information that I used to develop the education program. I modified the AHRQ Falls Management Program to serve as the primary model for developing the education program for the nursing staff. The evidence-based project has the potential to promote safety, improve the quality of life of the residents, and contribute to the professional development of the nursing staff.

Evidence Generated for the Doctoral Project

Participants

The goal of the staff education program was to provide the nursing staff, made up of registered nurses and licensed practical nurses, in a facility located in the Midwest region of the United States, with evidence-based fall prevention knowledge that would transform into practice and consequently decrease falls at the facility. I selected the nurses of the facility for the project because they were at the center of the fall prevention process. Unlike other disciplines in the facility, the staff nurses were responsible for documenting all falls and implementing fall interventions and care plans. Non nursing staff were excluded from the project because they do

not directly deal with falls unless they are part of the interdisciplinary risk management team. For example, if a resident of the facility fell in the presence of a nurse and a physical therapist, the nurse was responsible for completing the assessment and documentation of the incident. On the other hand, if the fall happened in the presence of the physical therapist, the therapist only had to write an incident report on the fall and hand it to the nurse for further processing.

Procedure

The leadership team identified the need to address increasing falls at the skilled nursing facility. There were 23 staff nurses employed by the facility who work with the residents who were at risk for falls. I discussed the proposed project plans and program goals with the leadership and risk management teams and solicited their input and insights. The leadership team was very supportive of the program and stated their commitment to address the high incidence of falls in the facility. I obtained site agreement from the Walden University Institutional Review Board (IRB) that was signed by the facility administration to indicate their commitment for the evidence-based project.

I implemented the following steps to complete the education program: First, the leadership team identified five key stakeholders, including two nurses, to review the education program objectives and content that I presented to the staff nurses. The stakeholders anonymously completed a formative review questionnaire. The questionnaire included five questions about the relevance, quality of the content, and the extent to which the fall prevention module met the objectives of the project (Appendix D). The plan was revised based on the stakeholders' evaluation and resubmitted to them for reevaluation. I finalized the educational program after a consensus was achieved based on the evaluation of the stakeholders. Secondly,

administration posted a recruitment flyer on bulletin boards at the nurses' stations and breakroom for the nurses. The flyer identified the purpose of the program, offered the opportunity to participate, and provided the times and venue for the presentation. Thirdly, the administration agreed for me to present the fall prevention program during a scheduled mandatory staff training session. The participating nurses were paid by administration to attend the staff training. The program was held in a room at the institution provided by administration. The program was offered at different times to accommodate the nurses' time schedules. Nurses attended the session relative to their work schedule. At the beginning of each program session, the information in the consent was reviewed with the participants and each participant received a copy of the consent to read. The presentation was approximately 30 minutes, and the nurses completed a pretest (see Appendix A) before participating in the presentation and a posttest (See Appendix B) after the presentation. The fall prevention education was presented as a PowerPoint presentation based on a revised AHRQ Falls Management Program (Appendix C). At the end of the session participants completed an evaluation of the program (Appendix D). The overall outcome of the evidence-based project was an improvement in knowledge of the staff nurses.

Protections

The ethics of participant protection in research guard against the abuse of participants rights (Ross et al., 2018). Walden University has high ethical standards with respect to the protection of participants (see Walden University, 2018). I therefore took the following steps to ensure that participants were adequately protected throughout the program:

- The names of the participants and the facility were not included in any written report of this project.

- Administration recruited the staff and took attendance; therefore, information that identified the participants was collected but not shared with me. I only counted the number of participants for my records. I numbered the questionnaires and instructed the participants not to write their names or any identifying information on the questionnaires.
- The consent form indicated that participants may opt out of participating and or taking the tests without any consequences.
- Participants were informed that the results of the tests would be reported in aggregate form and would not include the name of participants or the facility.
- The participants were informed that the only benefit in participating in the program would be the evidence-based knowledge they would receive about how best to prevent falls that may occur when providing care to their patients.
- The participants were not exposed to any risks beyond those of typical daily life experiences.
- The plans to implement the program began after approval from Walden University IRB (Walden University IRB approval number 01-15-20-0392433).

Analysis and Synthesis

I analyzed the results of the pre-/posttest with Microsoft Office Excel using descriptive statistics with percentages to determine if there was a difference in the nurses' knowledge after participating in the educational program.

Summary

In this section, I examined the practice-focused question and how it aligned with the evidence-based project. The gap in practice that I identified was education, hence the practice-focused question that delved into whether a staff education program would increase nursing staff knowledge of preventative measures and decrease patient falls in a skilled nursing facility. I outlined the objectives of the project and discussed data collection and analyses for the project. Fall data collection and analysis are crucial for fall prevention (AHRQ, 2017). Among other things, data collection and analysis may be used to identify problem areas as well as the effectiveness of a fall prevention program. In my evidence-based project, I used data collection and analysis to identify if nurses became more knowledgeable about evidenced-based fall prevention practices after participating in the program.

Participants of the project were staff nurses due to their role in direct care coordination. The process comprised a pretesting, PowerPoint presentation, and posttesting, with the prior approval of leadership. Information gathered during the process was kept confidential. I discuss the findings, limitations, and recommendations in Section 4.

Section 4: Findings and Recommendations

Introduction

About 3 million adults 65 and older receive treatment for fall related injuries annually in the United States despite efforts by healthcare organizations to address the problem (CDC, 2019). The challenges of fall prevention are multifactorial and include lapses in fall risks assessment and documentation, staff education, and communication (Joint Commission, 2017). The evidence-based project was initiated as a result of increased fall rates in a long-term care setting in spite of fall prevention measures. The gap-in-practice identified in this situation was knowledge deficit for the fall prevention process among staff.

Staff nurses play a pivotal role in the fall prevention process; therefore, the purpose of this project was to develop a staff education program to equip staff nurses with the information needed to address the problem of falls among older adults. The project was guided by the following practice-focused question:

PFQ: Will a staff education program that focuses on evidence-based preventive measures and identification of specific needs of residents at risk for falls increase nursing staff knowledge of measures to decrease patient falls in a skilled nursing facility?

I developed the content of the fall prevention program using a PowerPoint program and the pre- and posttests. The validity of course content was evaluated by content experts (Appendix D). They all agreed that the objectives, course content, and the tests were valid. The nurses completed a pretest prior to participating in the educational program and a posttest after completing the program. I used descriptive analysis to determine the mean score of the pre- and posttest using the Excel statistical program.

Eighteen staff nurses in a homecare setting with experience in long-term care participated in the education program to increase their knowledge of fall prevention. The nurses completed a pretest prior to participating in the fall prevention program and a posttest after completing the program. The fall prevention program included evidence-based information on fall prevention and was presented as a PowerPoint presentation. However, due to the Covid 19 restrictions, the institution refrained from having in person meetings. I communicated with the director of nursing primarily via phone calls and emails. The director of nursing administered the pre- and posttest to the participants. I converted the lecture to a voice over PowerPoint presentation and the director of nursing presented it to the staff. I went to the director's office and picked up the completed pre- and posttests and transferred the results from the tests onto an Excel spreadsheet. I used descriptive analysis via the Microsoft Excel statistical analysis program.

Findings and Implications

I present the analysis of the data obtained from the pre- and posttest in this section. The mean for the pretest was 83 as compared to 100 in the posttest, which is an improvement that may be attributed to the staff educational program. The median pretest performance was 85, which was above average, an indication that most of the nursing staff were knowledgeable in fall prevention prior to the program. However, improving the outcome was necessary because falls result in injuries and fatalities, particularly among older adults. The nurses scored 100 points in the posttest. The minimum and maximum scores for the pretest were 50 and 100, respectively. Two nurses scored 50 points, two scored 60, five scored 80, three scored 90, and six scored 100 points in the pretest. The minimum score of 50 was an average of the total score; however, the low score of 50 indicated a need for educating the nurses about fall prevention. The scores

improved after the presentation, with all the nurses scoring 100 points in the posttest. The minimum scores improved to 100 during the posttest.

Table 2

Nurses Score

Statistics	Pretest score	Posttest score	Difference
Mean	83	100	17
Median	85	100	15
Minimum	50	100	50
Maximum	100	100	0

Table 3 reflects management evaluation of the educational program. The management group that evaluated the project was made up of the chief executive officer, office manager, human resource manager, the director of nursing, and nurse manager. These stakeholders strongly agreed with the scope, objective, content, and the presentation of the fall prevention educational program.

Table 3*Stakeholders' Evaluation*

Question	Response	Percentage
The scope and purpose are clearly presented	Strongly agree Agree Neutral Disagree Strongly disagree	100
The objectives are specifically described	Strongly agree Agree Neutral Disagree Strongly disagree	100
The information in the presentation will help nurses identify residence at risk for falls and educate the nurses about evidence-based intervention.	Strongly agree Agree Neutral Disagree Strongly disagree	100
The information for the presentation is easy to understand	Strongly agree Agree Neutral Disagree Strongly disagree	100
The time for presentation is manageable	Strongly agree Agree Neutral Disagree Strongly disagree	100

Table 4 represents the nurses' evaluation, with the focus on the relevance of the training module, content, presentation, and application of the fall prevention program. The analyses indicated the nurses found the program relevant, met their needs, were content with the presentation and were likely to apply it in practice.

Table 4

Nurses' Evaluation

Question	Response	Percentage
How relevant is the staff education module for Fall presentation?	Very relevant	80
	Relevant	20
	Somewhat relevant	-
How will you rate the content of the staff education module?	Excellent	100
	Good	-
	Fair	-
	Poor	-
Does the staff education module meet your educational need?	Exceeds	80
	Meet	20
	Neutral	-
	Does not meet	-
How likely are you to apply the staff education module in practice?	Very Likely	100
	Somewhat likely	-
	Not at all likely	-
How would you rate the presentation of the staff education module?	Excellent	70
	Good	30
	Fair	-
	Poor	-

An unanticipated outcome of the project occurred because of the COVID-19 pandemic, which resulted in lockdowns and tight restrictions on long term care facilities across the nation in an attempt to protect the senior and vulnerable populations (see CMS, 2020). Data collection for the evidence-based project therefore took place in a homecare setting, which may have affected the outcome of project because there may be different experiences between the nurses in each setting.

The pretest indicated that the nurses were knowledgeable about fall prevention; however, falls affects quality measures and may elicit safety and liability issues. Hence there was a need for the evidence-based project to improve the knowledge of staff nurses. The posttest reflected an improvement in knowledge among the nurses. The positive outcome of the project may help improve fall prevention practices of the nurses and the quality of life of the patients.

Recommendations

Fourteen out of the 18 staff nurses who participated in the evidence-based program scored above average, between 80 and 100 points in the pretest; however, some nurses scored as low as 50 points. This outcome provided an insight into the gap in practice for fall prevention. My primary recommendation is the need to establish consistency in fall prevention education through periodic training of all staff nurses to address knowledge deficit and to reinforce evidence-based fall prevention practices. The pre-/posttest design used in the project, for example, would identify strengths and deficits in fall prevention among healthcare providers. I also recommend the staff educational program for other members of the healthcare team such as nursing assistants, janitorial, maintenance, activity and dietary personnel, and others in future projects to establish a comprehensive approach in fall prevention for better outcomes. These

training sessions may be completed face-to-face during in-service training or electronically in the form of mandatory fall prevention modules to keep healthcare workers abreast with the current fall prevention practices. In addition, I recommend posting concise fall prevention education information in patient rooms and common areas to serve as reminders for both staff and patients.

Strengths and Limitations of the Project

The outcome of the project indicated that educating staff nurses improved their knowledge and perspectives on evidence-based fall prevention practices. The posttest showed improvement in knowledge of fall prevention after training and supported that fall prevention requires a comprehensive approach.

There were also some unanticipated limitations of the evidence-based project. I was unable to recruit a larger number of the nurses for the evidence project due to the COVID-19 restrictions, which caused nurses and healthcare facilities to shift priorities from falls to managing the pandemic.

I designed the project for a long-term care facility. However, the facility was shut down due to a state mandate to protect seniors living in these facilities during the coronavirus pandemic (see CMS, 2020). The IRB granted alternative methods to enable data collection at other facilities; however, data collection was stalled when the facilities were plagued by the coronavirus and were locked down. Eventually, I received IRB approval to complete the data collection process with staff nurses in a homecare setting. I planned to present the fall prevention PowerPoint module in-person; however, I had to use a voice over PowerPoint presentation because the institution did not allow in-person presentation due to the pandemic.

Section 5: Dissemination Plan

The staff education program was intended to improve staff nurses' knowledge of fall prevention and to help reduce the incidence of fall and injuries among patients. The outcome of the project will be disseminated among the leadership of the institution to update the staff on the current evidence of fall prevention. Dissemination will also include the staff nurses at healthcare institutions to improve fall prevention outcomes and enhance professional development. The findings will be submitted to the ProQuest database for publishing. The findings will be shared with local nursing agencies such as Ohio Nurses Association, Ohio Association of Advanced Practice Nurses, Ohio Academy of Nursing Homes, and the Ohio Council for Home Care, among others.

Analysis of Self

This evidence-based project was challenging and rewarding. Primarily, I was able to contribute to the knowledge of fall prevention in geriatric nursing, which is my specialty as a gerontology nurse practitioner. The process required in-depth assessment of the current evidence, which helped me direct the project and educate the nursing staff. The project has also enlightened me on the best practices and enabled me to explore the application of nursing theories and concepts, to improve nursing knowledge and clinical outcomes. I had the opportunity to interact with staff nurses and gained insights of their challenges of fall prevention, which enabled me to design the staff educational program to meet their learning needs. These experiences enabled me to effectively translate the evidence into practice.

The COVID-19 pandemic resulted in global restrictions, which recommended against in-person gatherings. These restrictions affected many human activities including academic

processes such as in-person data collection. The IRB therefore approved alternative methods of collection, which prompted the design of a voice over PowerPoint presentation to educate staff nurses about fall prevention. These changes reiterated the need for preparedness and innovation in anticipation of unforeseen activities in future evidence-based projects.

Summary

Falls prevention presents challenges in all healthcare settings and require a comprehensive approach (Leverenz & Lape, 2018). This evidence-based project was aimed at addressing staff education, which is an important part of the fall prevention process. The project focused on educating staff nurses to improve their knowledge on fall prevention with the goal of preventing or reducing falls. The project was guided by the following practice-focused question:

PFQ: Will a staff education program that focuses on evidence-based preventive measures and identification of specific needs of residents at risk for falls increase nursing staff knowledge of measures to decrease patient falls in a skilled nursing facility?

I revised a Falls Management Program by the AHRQ to develop a teaching module for staff nurses. I also used Knowles's theory of adult learning to develop effective methods of educating the staff nurses. The procedure involved a pretest to assess nurses' knowledge on fall prevention, a voice over PowerPoint presentation on fall prevention, and a posttest to assess the change in fall prevention knowledge after the fall prevention education.

The outcome of the project showed improved knowledge in fall prevention among the staff nurses. A pretest mean score of 82 improved to 100 in the posttest, and a minimum score of 50 in the pretest improved to 100 in the posttest, which showed an improvement in knowledge after the staff education program on fall prevention. The improved knowledge in fall prevention

is expected to improve fall prevention activities among the nurses who participated in the project, which is congruent to the current evidence on fall prevention.

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Appendix A: Pretest

Fall Prevention Assessment

Please circle the letters that correspond to the correct answers.

1. Which of the following Effects of normal aging may increase the risk for falls?
 - I. Decreased acuity
 - I. Decreased hearing sensitivity
 - II. Slowed reaction time
 - III. - Feelings of urgent need to urinate and having to urinate frequently
 - A. I, II
 - B. II, III
 - C. I, IV
 - D. All the above
2. Risk factors for falls include all of the following *except*:
 - A. Dizziness/vertigo
 - B. Previous fall history
 - C. Antibiotic usage
 - D. Impaired mobility from stroke disease
3. Which of the following statements is *true*?
 - A. The cause of a fall is often an interaction between patient's risk, the environment, and patient risk behavior.
 - B. The use of a patient identifier (e.g., falling star) helps to highlight to staff those patients at risk for falls.
 - C. A fall risk assessment should include review of history of falls, mobility problems, medications, mental status, continence, and other patient risks.
 - D. All the above

4. Patients with impaired mobility should:
 - A. Be confined to bed
 - B. Be referred for Gait and balance training
 - C. Not be allowed to complete any activities of daily living
 - D. Be encouraged to ambulate independently

5. The management of the confused resident should include all of the following *except*:
 - A. Moving patients away from the nursing station
 - B. Provide a routine each day.
 - C. Schedule periods of physical activity.
 - D. Use the staff member with the best relationship with the resident to give care when possible.

6. Which of the following statements is *false*?
 - A. Fall prevention efforts are solely the nurses' responsibility.
 - B. A resident who is taking four or more oral medications is at risk for falling.
 - C. A resident who is taking psychotropic medication is at higher risk for falling.
 - D. Testing or treatment for osteoporosis should be considered in patients who are at high risk for falls and fractures.

7. When assessing patients, which of the following statements is *false*?
 - A. All patients should be assessed for fall risk factors at admission, at a change in status, after a fall, and at regular intervals.
 - B. Medication review should be included in the assessment.
 - C. All patients should have their activities of daily living and mobility assessed.
 - D. Environmental assessment is not important

8. Chronic illnesses such as Parkinson's, Alzheimer's, stroke, arthritis can increase the risk for falls. True or False?
- A. True
 - B. False
9. Behavior management in fall prevention should include all the following *except*:
- A. Break down complex tasks into single steps
 - B. Give as much control to the resident as possible
 - C. Use distraction
 - D. Use force to enable residents complete tasks
10. Which of the following statements on environmental management in fall prevention is *false*?
- A. Label the resident's door, bathroom, or other areas to help resident locate areas.
 - B. The environment is not a risk factor for falls
 - C. Reduce distractions of unattended TVs, intercoms, or other background noise.
 - D. Provide safe outdoor areas for walking and propelling wheelchairs.

Answer Key:

- 1. D
- 2. C
- 3. D
- 4. B
- 5. A
- 6. A
- 7. D
- 8. A
- 9. D
- 10. B

Appendix B: Posttest

Fall Prevention Assessment

Please circle the letters that correspond to the correct answers.

1. Which of the following Effects of normal aging may increase the risk for falls?
 - II. Decreased acuity
 - IV. Decreased hearing sensitivity
 - V. Slowed reaction time
 - VI. - Feelings of urgent need to urinate and having to urinate frequently
 - A. I, II
 - B. II, III
 - C. I, IV
 - D. All the above
2. Risk factors for falls include all of the following *except*:
 - A. Dizziness/vertigo
 - B. Previous fall history
 - C. Antibiotic usage
 - D. Impaired mobility from stroke disease
3. Which of the following statements is *true*?
 - A. The cause of a fall is often an interaction between patient's risk, the environment, and patient risk behavior.
 - B. The use of a patient identifier (e.g., falling star) helps to highlight to staff those patients at risk for falls.
 - C. A fall risk assessment should include review of history of falls, mobility problems, medications, mental status, continence, and other patient risks.
 - D. All the above

4. Patients with impaired mobility should:
 - A. Be confined to bed
 - B. Be referred for Gait and balance training
 - C. Not be allowed to complete any activities of daily living
 - D. Be encouraged to ambulate independently

5. The management of the confused resident should include all of the following *except*:
 - A. Moving patients away from the nursing station
 - B. Provide a routine each day.
 - C. Schedule periods of physical activity.
 - D. Use the staff member with the best relationship with the resident to give care when possible.

6. Which of the following statements is *false*?
 - A. Fall prevention efforts are solely the nurses' responsibility.
 - B. A resident who is taking four or more oral medications is at risk for falling.
 - C. A resident who is taking psychotropic medication is at higher risk for falling.
 - D. Testing or treatment for osteoporosis should be considered in patients who are at high risk for falls and fractures.

7. When assessing patients, which of the following statements is *false*?
 - A. All patients should be assessed for fall risk factors at admission, at a change in status, after a fall, and at regular intervals.
 - B. Medication review should be included in the assessment.
 - C. All patients should have their activities of daily living and mobility assessed.
 - D. Environmental assessment is not important

8. Chronic illnesses such as Parkinson's, Alzheimer's, stroke, arthritis can increase the risk for falls. True or False?
- A. True
 - B. False
9. Behavior management in fall prevention should include all the following *except*:
- A. Break down complex tasks into single steps
 - B. Give as much control to the resident as possible
 - C. Use distraction
 - D. Use force to enable residents complete tasks
10. Which of the following statements on environmental management in fall prevention is *false*?
- A. Label the resident's door, bathroom, or other areas to help resident locate areas.
 - B. The environment is not a risk factor for falls
 - C. Reduce distractions of unattended TVs, intercoms, or other background noise.
 - D. Provide safe outdoor areas for walking and propelling wheelchairs.

Answer Key:

- 1. D
- 2. C
- 3. D
- 4. B
- 5. A
- 6. A
- 7. D
- 8. A
- 9. D
- 10. B

Appendix C: Power Point Presentation on Falls

Staff Education on Fall Prevention

Solomon Lomo – (DNP Student)

Walden University

Dr. Cynthia Fletcher

Objectives

At the end of the education program, staff nurses will:

- * Identify the effects of aging on falls
- * Identify disease processes that can contribute to falls
- * Discuss the role of medication regimen in falls among residents
- * Discuss key components of fall risk assessments
- * Discuss evidence-based fall prevention measures may be used to reduce or prevent falls

Fall Facts

- * General Population 34.9 million people ≥ 65 years of age
- * One in three elderly persons living in the community fall each year
- * Of deaths caused by a fall, 60% involve people who are ≥ 75 years of age
- * Falls account for 87% of all fractures in people ≥ 65 years of age

Fall Facts

- * The average age at admission to a nursing facility is 82.6 years
- * Over 50% of those admitted to a nursing facility have three or more admitting diagnoses
- * One in two patients in nursing facilities fall every year
- * Of those patients who fall, 30-40% will fall again
- * People ≥ 85 years are 10-15 times more likely to experience hip fractures than those people who are 60-65 years

Consequences of Falls

- * Serious injury such as hip fracture
- * Increased risk of death associated with hospitalization and complications
- * Loss of independence and decreased ability to function
- * Loss of self-confidence and fear of falling
- * Reduced quality of life
- * Increased need for care

Intrinsic Fall Risk Factors/Effects of Normal Aging

- * **Vision** - decreased acuity, decreased contrast sensitivity, increased sensitivity to glare, decreased peripheral vision, decreased night vision
- * **Hearing** - decreased hearing sensitivity
- * **Gait & Balance** - reduced arm swing, decreased step length, slowed reaction time, slower movements
- * **Urological** - feelings of urgent need to urinate and having to urinate frequently

Intrinsic Fall Risk Factors/Acute & Chronic Diseases

- * Parkinson's, Alzheimer's, stroke, arthritis, depression, cancer, osteoporosis
- * Delirium, disorientation, agitation, impaired judgment
- * Weakness, dizziness, fainting
- * Paralysis, tremors
- * Loss of joint mobility, contractures
- * Lower extremity weakness
- * Drop in blood pressure upon standing, after meals or after voiding
- * Incontinence

Intrinsic Fall Risk Factors/Effects of Medications

- * (Antidepressants, Sedatives/Hypnotics, and Antipsychotics)
 - * Dizziness
 - * Confusion, impaired judgment
 - * Weakness, impaired gait
 - * Sedation, slowed reaction time
- * Drug interaction and/or polypharmacy

Staff Strategies to Reduce Fall Risk

- * All patients should be assessed for fall risk factors at admission, at a change in status, after a fall, and at regular intervals.
- * Falls assessment to determine problems with medications, behavior, vision, gait, and mobility, or presence of postural hypotension
- * Medical evaluation
- * Medication review
- * Gait and balance training

Behavior management

Match the Demands of Caregiving to the Patient's Abilities

- * Watch for signs of increasing anxiety. When resident's anxiety increases, slow down, re-explain, reassure, or return later.
- * Provide a routine each day.
- * Schedule periods of physical activity.
- * Provide times of rest.
- * Use the staff member with the best relationship with the resident to give care when possible.

Behavior management

Match the Demands of Caregiving to the Patient's Abilities

- * Break down complex tasks into single steps.
- * Show the resident how to begin an action.
- * Simplify clothing fasteners.
- * Give as much control to the resident as possible.
- * Give rewards.
- * Use distraction.

Behavior management

Match the Demands of Caregiving to the Patient's Abilities

- * Instead of using force, return later and try a different approach.
- * Anticipate the resident's needs.
- * Provide opportunities for touch through hugging and holding hands with others.
- * Provide contact with animals, gardening, or objects with different textures and shapes.
- * Make sure resident wears hearing or visual aids.
- * Use activity boxes or reminiscence boxes.

Environmental Management

- * Label the resident's door, bathroom, or other areas to help resident locate areas.
- * Reduce distractions of unattended TVs, intercoms, or other background noise.
- * Put easily confused residents in small groups for eating or activities.
- * Put residents who are sensitive to noise in quieter rooms. Use soothing music.
- * Provide safe outdoor areas for walking and propelling wheelchairs.

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Appendix D: Stakeholders Evaluation

Question	Response	Percentage
The scope and purpose are clearly presented	Strongly agree	100
	Agree	-
	Neutral	-
	Disagree	-
	Strongly disagree	-
The objectives are specifically described	Strongly agree	100
	Agree	-
	Neutral	-
	Disagree	-
	Strongly disagree	-
The information in the presentation will help nurses identify residence at risk for falls and educate the nurses about evidence-based intervention.	Strongly agree	100
	Agree	-
	Neutral	-
	Disagree	-
	Strongly disagree	-
The information for the presentation is easy to understand	Strongly agree	100
	Agree	-
	Neutral	-
	Disagree	-
	Strongly disagree	-
The time for presentation is manageable	Strongly agree	100
	Agree	-
	Neutral	-
	Disagree	-
	Strongly disagree	-

Question	Response	Percentage
How relevant is the staff education module for Fall presentation	Very relevant	80
	Relevant	20
	Somewhat relevant	-
How will you rate the content of the staff education module	Excellent	100
	Good	-
	Fair	-
	Poor	-
Does the staff education module meet your educational need?	Exceeds	80
	Meet	20
	Neutral	-
	Does not meet	-
How likely are you to apply the staff education module in practice	Very Likely	100
	Somewhat likely	-
	Not at all likely	-
How would you rate the presentation of the staff education module	Excellent	70
	Good	30
	Fair	-
	Poor	-