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THE IMPACT OF NURSE-LED FALL PREVENTION PROGRAMS ON REDUCING FALL-RELATED INJURIES

Majed Salah Marzouq Al-Harbi, Mutaib Abdualrhman Mukhlid Alotaibi, Ashwaq Ali Musa Al Moalwy, Naif Abdullah Abdalrhman Alharbi, Maha Mahdi Hazaa Alanazi, Faisal Faleh Baruk Alharbi, Ashwaq Sultan Alsaluli, Abdulrahman Abdulla Alsahli, Abdulmajeed Hajed Alotaibi, Mahal Bander Alotaibi, Mohammed Ibrahim Alreshoodi, Rasheed Mohammed Alotaibi, Itidal Mohammed A Alnami, Mona Ali Al Bishi, Hatem Saud Alarifi

Abstract

Falls among the elderly can be avoided, and nurse-led fall prevention initiatives are effective and feasible ways to stop falls. The purpose of this systematic review was to learn more about the impact of nurse-led fall prevention initiatives for senior citizens. This literature search was done using the CINAHL, MEDLINE, Eric, Science Direct, and Google Scholar databases. The Preferred Reporting Items for Systemic Reviews and Meta-Analysis were followed as a framework for reporting this research. The papers' quality rating and degree of evidence were assessed using the Johns Hopkins Nursing Evidence-Based Practice, and a matrix review method was utilized to extract the data. The duties of nurses included assessing patients, educating them, administering exercise regimens, and following up with patients after interventions. Five studies found a reduction in fall rates and fall events, whereas three studies found alterations in patient behavior. Positive results were obtained from fall prevention programs that included teaching components tailored specifically for nursing staff and older persons. The outcomes of patients are greatly improved by nursing staff, and the benefits of a fall prevention program that aims to lower the rate of falls that cause injury and improve participant behavior might be maximized.

Keywords: nursing-led, older adults, education, falls, prevention, rates, and literature review

1. Introduction

Patient falls are a nursing-sensitive indication that depends on the caliber and volume of nursing care provided and influences patient outcomes.1. Fall prevention is crucial, as older persons are more likely to experience falls that could result in chronic consequences. Planning, carrying out, and assessing a range of interventions aimed at nursing-sensitive metrics is essential.2. To increase patient safety, a number of fall prevention strategies have been implemented in acute care, long-term care, and community settings. Patient falls are a dangerous occurrence that affects both the patients and the healthcare system significantly.3.

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Hospitalization is necessary for severe sequelae such head injuries and hip fractures that occur in 20% of falls involving older persons. The healthcare system bears a heavy financial burden from patient falls; in 2015, Medicare and Medicaid Services in the US paid for 75% of the $50 billion in medical costs associated with falls.3. With up to 646,000 deaths annually, falls rank as the second most common cause of accidental or unintentional death worldwide, according to the World Health Organization (WHO).4

Due to aging-related increases in fall hazards and the potential for falls resulting in injury, falls provide a significant challenge to older persons. Patient falls are a public health issue that have a detrimental effect on people's quality of life and restrict their activities because of a fear of falling again.Six The cognitive condition of a patient has been found to be one risk factor for falls in older persons.5. According to a study, those with a history of falls were more likely to also have a chronic illness, poor functioning health, and poor memory.5. According to a different study, elderly persons who have lumbar spinal stenosis are more likely to fall because of their shortened strides. Some people are more likely to fall because they experience neurological symptoms such lower extremity restriction and motor dysfunction.7. Gender and lower body strength are significant risk factors for falls in older persons, with women being more likely to fall than males.8 The use of some pharmaceuticals raises the risk of falling. For instance, antiplatelet medications are linked to a lower risk of falls, but betablockers increase the risk of falls.9. It's important to note that older persons who have experienced falls in the past have recognized vision issues, vitamin D deficiency, and balance issues as fall hazards.10

Every year, over 3 million elderly patients receive treatment for injuries caused by falls in the emergency room.3. Given that older persons often have several fall risks and encounter obstacles to fall prevention programs, it is imperative that nurses providing patient care accurately assess their patients' fall risk in order to create a personalized care plan.11 It is necessary to identify the kinds of fall prevention techniques that are more suitable for particular older persons, their characteristics, and those under the direction of nurses.12 A prior systematic review and a small number of systematic reviews on nurse-led fall prevention programs included studies that weren't all run by nurses.13

When it comes to carrying out fall prevention initiatives, nurses are crucial. Patient evaluation is one of them, along with communication with nursing assistants, nursing documentation, patient inclusion in the plan of care, and attending to the patient's requirements, such as watching over them in the restroom.17 A vital group of stakeholders in fall prevention initiatives are nurses. They make up the largest group of healthcare professionals, and their efforts are vital to the integration of fall prevention policies and the attainment of desired results.18 Together with physical therapists, pharmacists, occupational therapists, patients, and their families, nurses work as part of an interdisciplinary team in fall prevention to accomplish fall prevention objectives.19

A large number of previous systematic studies on fall prevention did not address the style of delivery or the involvement of nursing personnel. Instead, they concentrated on fall prevention education (20) or the review of fall prevention guidelines with fall prevention strategies (21). Of the studies evaluated, only 33.3% (n = 2) involved nurses in providing the educational intervention, whereas 66.6% (n = 4) involved professionals who were not nurses. Consequently, a comprehensive analysis of research describing fall prevention initiatives run by nursing personnel as well as their distinct responsibilities is required.

2. The Functions of Nurses in Fall Prevention Programs

In the fall prevention interventions, nurses had a variety of responsibilities, such as evaluating patients' ability to maintain balance, giving exercise regimens, and monitoring patients' physical performance.29, 23 Furthermore, nurses assessed the fall risk of the residents 10, 32, 33 and created personalized care plans for each patient based on their unique needs.10, 35, 23, 34 Patients who were at risk of falling were identified using the MAHC-10 assessment instrument. A score of zero to four denoted no risk, whereas four or more denoted a significant chance of falling.32 The Morse Fall Scale, Turkish version, was employed to evaluate the study subjects' fall risk.34

Nurses taught fall prevention classes that concentrated on recognizing fall hazards, taking medications safely, or exercising.32, 30, 34 Nurses led physical exercise regimens and provided encouragement.30,9 After the intervention, nurses gathered data on the study outcomes by conducting telephone or in-person interviews.10, 32, 35, 29 30 9 23

3. Interventions for Fall Prevention with an Educational Focus

One study's main intervention was education for nursing personnel that concentrated on how to complete patient assessments.33 Six trials, on the other hand, involved a workshop, training, or educational component for nurses that concentrated on carrying out the intervention, such as patient behavior modification, exercise training, and patient assessment.10, 35, 28, 29, 23, and 31 Three studies focused on identifying fall hazards and fall prevention while directing the teaching component of the intervention at the patients who were taking part.32, 30, 34 Family members were only involved in two studies where the residents received training.30, 28 But in the two studies where education was the main intervention, contradictory findings were found. A study by Montejano-Lozoya et al. (33) shown that nurses who participated in educational activities had a decreased chance of falling in the intervention group (0.3%, n = 303) as opposed to the control group (2.2%, n = 278). Conversely, neither the number of falls nor the patients' fear about falling was impacted by the educational intervention provided to them in Uymaz and Nahcivan34.

4. Results for Patients

Risks of Falling and Fear of Falling According to two studies, fear or worry about falling was a risk factor for falls, although it greatly decreased by the time the intervention ended.28,23

Following the intervention, fall risk assessment scores using the FAB scale, the Morse Fall Scale, and the Missouri Alliance for Home Care 10 (MAHC-10) item survey decreased.32, 29 and 34 Following the intervention, the proportion of patients in the intervention group who did not fear falling rose in comparison to the control group.34

The success of the fall prevention initiatives was largely due to the nursing staff's leadership in patient assessment, care plan development, patient education, and assuring appropriate care delivery. Before administering the interventions, nurses conducted fall risk assessments in more than 50% of the studies. An essential first step in providing patients with a baseline of their fall risk and individualized interventions to fit their requirements is the nurses' risk assessment of the patients. This is consistent with the results of a systematic review21, which indicated that assessment tools were included in all guidelines.

By using a standardized technique to assess patients' fall risks, healthcare practitioners can make more informed decisions, create personalized care plans, better match patients' needs with risks, and enhance communication between them.19 One standardized instrument designed to help home health agencies comply with the CMS guideline is MAHC-10. A fall risk score of four or more indicates a high fall risk, whereas a number of less than four suggests a low fall risk.32 The study conducted by Chidume32 demonstrated a clear grasp of patient evaluation when the mean scores decreased from 4.87 (SD=1.978) to 4.83 (SD=1.821) using the MAHC-10 mean score. Based on the Fullerton Advanced Balance (FAB) scale, which was utilized in the study to test balance, a score of 29 on the scale indicates fall risk, and a score of 25 indicates a significant risk of falling. Both the patients' balance and the identification of those who were more likely to fall benefited from this knowledge. In the meantime, the functional reach test23 and the FAB scores significantly improved after balance was assessed using a conventional tool.29

5. Nursing Practice Consequences

The outcomes of the nurse-led fall prevention initiatives showed that fall prevention strategies for senior citizens could be both promising and successful. Fall prevention was successfully addressed by intervention modalities that included educational components. Nurse adherence to fall prevention programs is aided by the use of standardized assessment instruments, which enhance communication amongst healthcare providers. Programs for fall prevention that assess patients' balance, fall rates, and fall injuries may be a useful intervention to enhance patient outcomes. Positive results were obtained from more than 60% of the trials that involved patient or nursing staff education. While nurse leaders think about budgeting for fall prevention education, healthcare facilities may incorporate it into their programs.

6. Summary

The analysis and synthesis of the research indicated that fall prevention programs for older individuals that include education could be successful. The findings showed that nurses had

a tendency to enhance patient outcomes and nursing care. The results of this review's findings on fall rates, fall injuries, and behavior modification may be combined to optimize the benefits of fall prevention initiatives.

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