Fall Prevention in Older Adults

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Key Findings

- Implementation of a structured, evidence-based fall prevention program improved participant awareness of fall risks and safety strategies.
- Strength and balance exercises contributed to improved mobility and confidence among older adults.
- Community partnerships enhanced program accessibility, trust, and participation.
- Diverse interventions (exercise, education, and home safety) were effective.
- Participants reported increased knowledge and reduced fear of falling following the intervention.

Background and Purpose

Falls among adults aged 65 years and older remain a significant public health concern, contributing to injury, hospitalization, and decreased quality of life. Approximately one in four older adults experiences a fall annually, leading to substantial healthcare costs and increased risk of long-term disability (Dautzenberg et al., 2021). Recurrent falls are associated with fractures, traumatic brain injuries, and increased mortality (Ganz & Latham, 2020). Reducing falls was therefore imperative to reduce such injuries and improve the quality of life.

Despite the availability of evidence-based interventions, inconsistent implementation and limited access to prevention programs continue to pose challenges. Risk factors such as muscle weakness, impaired balance, unsafe home environments, and chronic conditions further increase vulnerability (Jehu et al., 2021). The purpose of this Doctor of Nursing Practice (DNP) quality improvement project was to implement a comprehensive, evidence-

based fall prevention program for community-dwelling older adults. This project addresses the two components of Quadruple Aim -1. Better Population Health: Improving health outcomes through prevention and management. Falls cause injuries such as hip fractures, traumatic brain injuries causing disabilities to older adults that force them in nursing homes or lead to death. 2.Lowering Costs: Reducing per capita healthcare spending-Every year approximately $3 million is spent on emergency department visits due to older people falls (Centers for Disease Control and prevention, 2026). According to Healthy People 2030, fall-related deaths among older adults are getting worse. In 2023,78.2 deaths per 100,000 occurred, an increase from 64.4 deaths per 100,000 in 2018 (target is 63.4 deaths per 100,000) (Office of Disease Prevention and Health Promotion, 2024).

Methodology

Project Design and Approach

The project was 13 weeks long and utilized a quality improvement pre- and post-intervention survey design to evaluate the effectiveness of a fall prevention program among community-dwelling older adults. Participants aged 65 and above, who lived independently and were capable of light-to-moderate physical activity, were recruited using a convenience sampling approach. Guest speakers such as Geriatrician, Occupational and Physical therapists were invited to address various areas affecting falls in older adults such as various diagnosis and medication, exercise, environmental safety, and physical health. A representative from the Seniors' Health Insurance and Information Program (SHIIP) was invited to discuss Medicare and supplemental insurance options available to seniors. These programs can assist with costs for services such as physical and occupational therapy, medications, visits to primary care providers, and even home modifications like installing handrails or ramps. Each week addressed a different aspect of fall risk and discussions on how to avoid these risks. The participants had a peer support session, where they discussed

openly about challenges they face, and joys of being older adults. Participants were able to share freely about what they felt after each session, with suggestions of what they would like to see, what went well and what needed improvement. The site liaison received this data each week, and the program was adjusted according to the Plan-Do-Study-Act (PDSA) model.

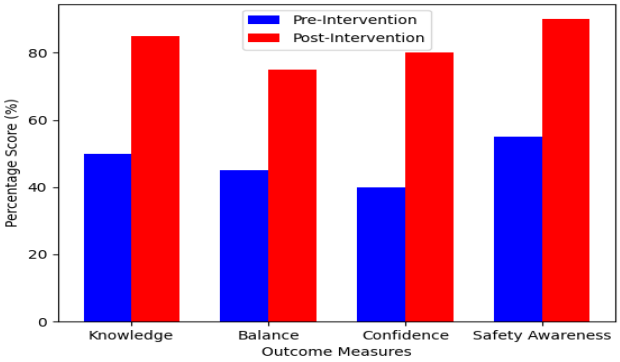
Participant knowledge, confidence, and perceived risk of falling were evaluated both prior to and following the intervention to measure any changes. Analysis focused on identifying improvements in outcomes and evaluating the effectiveness of multiple interventions. Both qualitative feedback (participant experiences) and quantitative observations (changes in awareness and mobility) informed the results.

Results

The project findings demonstrated that implementing a diverse, evidence-based fall prevention program improved participants' knowledge, confidence, and perceived ability to prevent falls. Participants showed increased awareness of fall risk factors and prevention strategies, along with improvements in balance and mobility following participation in structured exercise interventions, which are known to reduce fall risk (Dautzenberg et al., 2021). The combination of education, exercise, and home safety guidance proved more effective than single interventions, aligning with evidence that various approaches yield stronger outcomes (Eckstrom et al., 2024). Additionally, community partnerships enhanced engagement and accessibility, supporting improved participation and program reach (Pappa et al., 2023). Visual representations such as pre- and post-intervention comparison charts can further illustrate these improvements and enhance understanding of the program's overall impact.

Figure 1

Fall Prevention Program Outcomes



Note. Post-intervention scores are higher across all categories—knowledge, balance, confidence, and safety awareness—compared to pre-intervention levels. That indicates the program was effective in enhancing participants' understanding, physical stability, and confidence, thereby reducing fall risk among older adults.

Figure 1

Fall Prevention Program Outcomes

One of the key strengths of the project was its use of an evidence-based, multi-component intervention that combined education, strength and balance exercises, and home safety strategies, which are shown to be more effective than single interventions in reducing fall risk (Eckstrom et al., 2024). The structured pre- and post-intervention survey responses allowed for clear measurement of changes in participant knowledge and confidence. Additionally, the use of standardized protocols enhanced consistency and reliability, while strong community partnerships with local healthcare system improved participant engagement, accessibility, and overall program feasibility (Pappa et al., 2023). These factors contributed to the successful implementation and practical relevance of the project in a real-world community setting.

There are several limitations to keep in mind when reviewing the results. The short duration of the project limited the ability to assess long-term outcomes and sustainability of the intervention. Resource constraints, including time and staffing, language barrier for non-English speaking participants, restricted the scope of data collection and follow-up. The use

of convenience sampling and reliance on self-reported data may have introduced selection and reporting bias, potentially affecting the accuracy of the results. Additionally, barriers such as transportation challenges and varying levels of participant engagement may have influenced participation rates and limited the generalization of the findings to other populations or settings. These limitations highlight areas for improvement in future implementations.

Implications

The findings highlight several important implications for practice, emphasizing the importance of multi-component interventions. The project supports Healthy People 2030 goals by addressing fall-related morbidity and promoting safe aging. Delivering programs in community-based settings enhances accessibility and engagement, while early involvement of stakeholders improves acceptance and participation. Therefore, addressing barriers such as transportation and incorporating flexible delivery methods, including virtual or hybrid options, is essential for reaching a wider population. Additionally, long-term sustainability depends on strong collaboration between local healthcare systems and community organizations. Based on the insights, future projects should include pilot testing before full implementation, improved accessibility, strengthen data collection systems, incorporate long-term follow-up, and increased community awareness through targeted outreach efforts. According to Dautzenberg et al. (2021), spending on injuries related to falls is projected to reach $101 billion by 2030. Prevention falls reduces this trajectory and is in line with Quadruple aim of lowering costs (Saari et al., 2026). Apart from costs, fall prevention also lowers the chances of injuries and death. 1 in 10 falls leads to an injury requiring activity restriction or medical care (CDC, 2026). CDC (2026) also reports an estimated 319,000 older adults hospitalized due to hip fractures related to falls annually. Due to injuries from falls, some older adults must give up their independent lifestyle, move to a nursing home, and live

in constant fear of falling, thereby restricting their daily activities (CDC,2026). According to CDC (2026), those who are not lucky die from fall-related injuries such as hip fracture or traumatic brain injuries. Fall prevention reduces pain and suffering for this population and their loved ones.

Conclusion

Falls among older adults remain a preventable yet persistent health issue. The project demonstrated that implementing a structured, evidence-based fall prevention program can significantly improve awareness, confidence, and mobility among community-dwelling older adults.

Although there were difficulties with access and participation, the program was carried out effectively and met its main goals. The results support the effectiveness of multi-component interventions and highlight the importance of community partnerships in promoting health and safety.

The project provides a practical and scalable framework for fall prevention initiatives. By addressing both individual and environmental risk factors, such programs have the potential to reduce fall-related injuries, enhance quality of life, and support healthy aging in community populations.

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