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Purposeful Interventions for Older Adults Post-Joint Replacement Surgery: An Evidence-Based Project

Julia Christianson

Mallorie Corey

Erin Crouch

Juliann Felter

Ellen Gross

See next page for additional authors

Author

Julia Christianson, Mallorie Corey, Erin Crouch, Juliann Felter, Ellen Gross, Mariah Hedner Beckius, Aimee Lutz, and Monique Touchet

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Julia Christianson, Mallorie Corey, Erin Crouch, Juliann Felter, Ellen Gross,

Mariah Hedner Beckius, Aimee Lutz, and Monique Touchet

Faculty Advisors: Hannah Oldenburg, EdD, OTR/L, BCPR

and Kimberley Persons, DHS, OTR/L, CLA

St. Catherine University
Department of Occupational Therapy

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Keywords: older adults, joint replacement, orthopedics, falls, functional mobility

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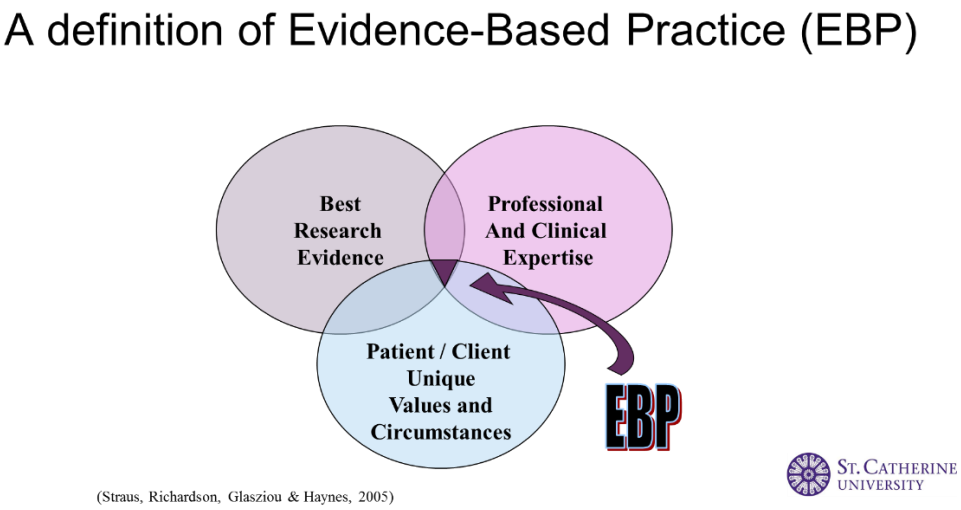
Introduction

Evidence Based Practice

Evidence based practice is defined as the integration of knowledge from professional and clinical expertise, patient/client unique values and circumstances, and best research evidence (Straus, Richardson, Glasziou, & Haynes, 2005). The EBP courses in the St. Catherine University occupational therapy programs emphasizes skill building in finding, analyzing, and synthesizing research.



The EBP Project

Occupational therapy graduate students at St. Catherine University complete an EBP project in partial fulfillment of the requirements for a course on Evidence-Based Practice.

The EBP Process

- Begins with a practice dilemma
- Dilemma is framed as an EBP question and PICO
  P (population/problem) I (intervention) C (comparison group) O (outcome(s) of interest)
- Background learning
- Search for the best evidence
- Initial appraisal and critical appraisal of the evidence
- Summary of themes from the evidence
- Recommendations for practice
- Next steps – implementation in practice

EBP Practice Dilemma: Evidence Based Practice Case Scenarios

The overall focus of each of case scenarios are related to assessment or interventions that are related to Choosing Wisely Campaign® items 1, 2, 3, 5, 8, 10. Case scenarios were developed related to each initiative with clientele and conditions across the lifespan in various practice settings. Practice settings included school district, outpatient pediatric, primary care, skilled nursing facility, work rehabilitation, and acute care.

Six EBP Projects: Choosing Wisely Campaign Initiative

The six projects are representative of 6 campaign items for the Choosing Wisely Campaign® and initiatives. There are a total of 10 campaign item initiatives promoted by the American Occupational Therapy Association.

Thing 1: Don't provide intervention activities that are non-purposeful (e.g., cones, pegs, shoulder arc, arm bike).

Thing 2: Don't provide sensory-based interventions to individual children or youth within documented assessment results of difficulties processing or integrating sensory information.

Thing 3: Don't use physical agent modalities (PAMS) without providing purposeful and occupation-based intervention activities.

Thing 5: Don't provide cognitive-based interventions (e.g., paper and pencil tasks, table-top tasks, cognitive training software) without direct application to occupational performance.

Thing 8: Don't use reflex integration programs for individuals with delayed primary motor reflexes without clear links to occupational outcomes.

Thing 10: Don't provide ambulation or gait training interventions that do not directly link to functional mobility.

Background on Choosing Wisely Campaign®

The Choosing Wisely started in 2012 by American Board of Internal Medicine (ABIM) and *Consumer Reports®,* which includes 75 health care provider organization partners, including the American Occupational Therapy Association (AOTA) being one of the organizations. Choosing Wisely aims to promote meaningful conversations between health care practitioners and clients to ensure that appropriate and quality care is being provided (AOTA, 2021). The mission is helping health care providers and clients in making informed and effective health care decisions, promote effective health care resources, and improve quality and safety of health care in the United States (AOTA, 2021). More specifically, campaign promotes assessment and

interventions are evidence based, effective, necessary, safe, and not duplicated among health care providers including occupational therapy practitioners. Experts within this campaign developed and published 10 things providers and clients should question with occupational therapy services across various practice settings (Table 1).

Table 1

10 Things Patients and Providers Should Question

Thing	Related Item
1	Don't provide intervention activities that are non-purposeful (e.g., cones, pegs, shoulder arc, arm bike).
2	Don't provide sensory-based interventions to individual children or youth within documented assessment results of difficulties processing or integrating sensory information.
3	Don't use physical agent modalities (PAMS) without providing purposeful and occupation-based intervention activities.
4	Don't use pulleys for individuals with hemiplegic shoulder.
5	Don't provide cognitive-base interventions (e.g., paper and pencil tasks, table-top tasks, cognitive training software) without direction application to occupational performance.
6	Don't initiate occupational therapy interventions without completion of the client's occupational profile and setting collaborative goals.
7	Don't provide interventions for autistic persons to reduce or eliminate "restricted and repetitive patterns of behavior, activities, or interests" without evaluating and understanding the meaning of the behavior to the person, as well as personal and environmental factors.
8	Don't use reflex integration programs for individuals with delayed primary motor reflexes without clear links to occupational outcomes.
9	Don't use slings for individuals with a hemiplegic arm that place the arm in a flexor pattern for extended periods of time.
10	Don't provide ambulation or gait training interventions that do not directly link to functional mobility.

Note. American Occupational Therapy Association. (2021). 10 Things Patients and Providers Should Question

Resources Regarding Choosing Wisely Campaign®

What is the AOTA Choosing Wisely Campaign?
Website Link: https://www.aota.org/Practice/Researchers/choosing-wisely.aspx

Implementing the Choosing Wisely Recommendations
Website Link: https://www.aota.org/Publications-News/otp/Archive/2019/implementing-choosing-wisely.aspx

Ten Things Patients and Providers Should Question (Updated July 2021)
Website Link: https://www.choosingwisely.org/societies/american-occupational-therapy-association-inc/

AOTA Choosing Wisely Campaign Resources (Select Clinical Application Resources)
Website Link: https://www.aota.org/Practice/Researchers/choosing-wisely.aspx

References

American Occupational Therapy Association. (2021). *AOTA's Involvement with Choosing Wisely®.* Retrieved from https://www.aota.org/practice/researchers/choosing-wisely.aspx

Appraisals of Best Evidence, Themes, and Recommendations

After searching and finding evidence available from library databases and alternative sources, students conducted an initial appraisal to evaluate the quality and relevance of the evidence and select the best research for further review. Then they conducted critical appraisals of the best formal reviews of primary research (e.g., systematic reviews, meta-analyses) and/or primary/original research studies. One of the steps in the CAP process is to evaluate the strength or level of the research design and the types of conclusions that are possible from each design.

Initial Appraisal

- Quality of the evidence
  - type of evidence and research design
  - investigator qualifications and journal/publication/website
  - journal/publication/website
- Relevance of the evidence

Critical Appraisal

- Appraisal of methods, results, and implications
- Classification of type of research study
  - Reviews of primary research (e.g., systematic reviews, meta-analyses)
  - Qualitative studies
  - Psychometric studies
  - Primary quantitative research studies
    - Level 1: randomized controlled trials
    - Level 2: two groups, nonrandomized/cohort and case control
    - Level 3: nonrandomized, pretest/posttest and cross-sectional
    - Level 4: single subject
    - Level 5: case report or series

After completing initial and critical appraisals, themes are summarized related to the EBP question and other findings that emerged from the evidence. Recommendations for practice and reflection on participating in an EBP project are identified in the conclusions.

Evidence-Based Practice Question

What are the current interventions for fall prevention and home safety for older adults after joint replacement in sub-acute setting?

Presentation Slides

Choosing Wisely Campaign: Thing #1

Purposeful Interventions for Older Adults Post Joint Replacement Surgery: An Evidence-Based Practice Project

Presenters: Julia Christianson, Mallorie Corey, Erin Crouch, Juliann Felter, Ellen Gross, Mariah Hedner Beckius, Aimee Lutz, & Monique Touchet

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Choosing Wisely® Campaign

What is the Choosing Wisely Campaign®? (AOTA, 2020)	**Our campaign** #1: Don't provide intervention activities that are non-purposeful (AOTA, 2020)	Campaign in relation to Occupational Therapy (Occupational therapy practice framework: Domain and process- fourth edition, 2020)

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Case Scenario

Scenario: You are an occupational therapist in a **sub-acute facility** working with **aging populations** (65+ years old) after **joint replacement surgeries**. Your rehabilitation manager has reported a decline in payment due to non-skillable intervention used by practitioners during their sessions with aging, joint replacement clients. You are asked to participate in a work group to recommend **best practice for older adults with joint replacements in a sub-acute setting**. More specifically, your manager encourages your work group to consider functional outcomes and interventions to support **fall prevention** and return to home.

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Evidence Based Practice - Question

EBP Question: What are the current interventions for fall prevention and home safety for older adults after joint replacement in a sub-acute setting?

P: Older adults (65+), post joint replacement surgery, sub-acute setting	**I:** Purposeful interventions	**C:** Joint replacement surgery vs. no joint replacement surgery	**O:** Fall prevention, home safety

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Rationale for Evidence

- Experience and Expert Opinion → Evidence-Based Practice (Brown, 2017)
- AOTA Code of Ethics (AOTA, 2020)
- Efficiency and Uniform Care (Brown, 2017)

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Background Knowledge

- **Fall Prevention:** intrinsic, extrinsic, and behavioral factors (Greany & Di Fabio, 2010)
- **Sub-acute Setting:** following hospital admission (American-Speech-Language-Hearing Association, n.d.)
- **Joint Replacement:** metal, plastic, or ceramic prosthesis (American College of Rheumatology, 2021)
- **Occupational Therapy Practitioners' Role:** providing skillable interventions (Morrow-Gorton, 2018)

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Search Process: Tools

- **Date of Search**
  - November, 2021
- **Database Search**
  - CINAHL, PUBMED, Science Direct, ProQuest,
- **Journal**
  - Health and Social Care in the Community, American Journal of Occupational Therapy, and Archives of Gerontology and Geriatrics
- **Alternative Search**
  - Mayo Clinic, Center for Disease Control and Prevention, American Occupational Therapy Association

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Search Process: Details

- **Keywords**
  - Joint replacement, home safety, sub-acute, fall prevention, behavioral/psych interventions, older adults, purposeful interventions, and education or adaptations.
- **Inclusion Criteria / Filters**
  - Within the past 10 years
  - English
  - Peer reviewed
  - Full text available
- **Level of Evidence Found (Article Types)**
  - Levels 1-4

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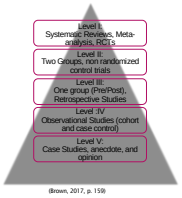
Overview of Initial Appraisals

- Range in Level of Evidence
- Methodology of Articles
- Stakeholders
- Article Categories
  - Primary
  - Reviews
  - Conceptual or Theoretical



(Brown, 2017, p. 159)

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Critical Appraisal 1

Occupational therapy fall prevention interventions for community-dwelling older adults: A systematic review (Elliott & Leland, 2018)

- Level of Evidence: Level I
- Relevance: Specific fall prevention interventions
- Methodology: Systematic review
- Findings: Use both education and exercise programs
- Bottom Line: Include education and functional exercise in individualized and population level fall prevention interventions for older adults

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Critical Appraisal 2

Understanding key home and community environment challenges encountered by older adults undergoing total knee or hip arthroplasty (Joshi et al., 2021)

- Level of Evidence: Level III
- Relevance: Home modifications decrease falls after surgery
- Methodology: Qualitative Descriptive
- Findings: Home modifications pre-surgery decreased fall risk post-surgery
- Bottom Line: Home modifications made presurgery have been found to reduce the number of challenges that older adults face in their home after surgery

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Critical Appraisal 3

A systematic review and meta-analysis of fall incidence and risk factors in elderly patients after total joint arthroplasty (Liu et al., 2020)

- Level of Evidence: IA
- Relevance: Addresses same target population and outcomes
- Methodology: Systematic review and meta-analysis
- Findings: Five primary risk factors of falls in older adults after total joint replacement
- Bottom Line: Early identification of risk factors

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Theme One
Fall risk factors in older adults

- Fall prevalence among older adults (Elliott & Leland, 2018)
  - One in four U.S. older adults
- Five primary risk factors (Liu et al., 2020)
  - Age, sex, obesity, falls history, and comorbidity of chronic disease
- Assessments identifying risk factors (Liu et al., 2020; Mayo Foundation for Medical Education and Research, 2018)
  - Five Times Sit to Stand (5X STS)
  - Single Leg Stance (SLS)
  - Timed Up and Go (TUG)
  - Activities-specific Balance Confidence Scale (ABC)

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Theme Two
Environmental factors that impact falls in older adults

Environmental Barriers
- Home safety hazards
- Kitchen, bedroom, & bathroom

(Joshi et al., 2021, Keglovitis et al.,2020, Chippendale & Raveis, 2017, Okoye et al., 2021)

Environmental Facilitators
- Home modifications
- Adaptive equipment

(Joshi et al., 2021, Peterson et al., 2012)

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Theme Three
Psychosocial factors that impact falls in older adults

Psychological and Social Barriers
- Fear of Falling
- Perception of Falling

(Okoye et al., 2021; Shuman et al. 2019)

Psychological and Social Facilitators
- Feeling healthy
- Someone at home to rely on
- Feeling at home

(Chippendale & Raveis, 2017; Magklara & Morrison, 2016; Peterson et al., 2012)

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Theme Four
Interventions for fall prevention

Education and activity-based interventions
(Elliott & Leland, 2018; Naseri et al., 2020)

Specific interventions
(Chippendale & Raveis, 2017; Liu et al., 2020; Shuman et al., 2019)

Provider education
(Johnston et al., 2010; Shuman et al., 2019; Wheeler et al., 2018)

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Summary

Occupational therapy practitioners can help their older adult patients reduce the risk of falls after being in the hospital by doing a variety of education and activities and using fall risk tests for home safety. They also must make sure to stay up to date on current fall reduction practices.

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Implications For Practice

- Interventions and assessments should be condition specific (Johnston et al., 2010; Shuman et al., 2019)
- Activities-specific Balance Confidence Scale (ABC) or Timed Up and Go (TUG) (Mayo Foundation for Medical Education and Research, 2018)
- Adequate training and knowledge (Wheeler et al., 2018)
- AOTA Choosing Wisely® Thing #1

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Limitations

- Small sample size (Elliott & Leland, 2018; Horowitz et al., 2016; Liu et al., 2020; Shuman et al., 2019; Wheeler et al., 2018)
- Low generalizability (Elliott & Leland, 2018, Okoye et al., 2021; Shuman et al., 2019)
- Limited occupational therapy specific research

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Recommendations and Future Research

- Standardized fall prevention curriculum (Johnston et al., 2010; Shuman et al., 2019)
- Condition-specific assessments to identify risk (Johnston et al., 2010; Joshi et al., 2021; Mayo Foundation for Medical Education and Research, 2018; Shuman et al., 2019)
- Combination of functional activities and education (Elliott & Leland, 2018; Nasseri et al., 2020)
- More population-specific research

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Conclusion

- Increased fall risk after joint replacement surgery (Lo et al., 2018)
- Environmental and psychosocial factors impact falls (Chippendale & Raveis, 2017; Joshi et al., 2021; Keglovits et al., 2020; Magklara & Morrison, 2016; Okoye et al., 2021; Peterson et al., 2012; Shuman et al., 2019)
- Interventions including education and activity (Elliott & Leland, 2018; Nasseri et al., 2020)

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Themes

Persons over 65 years of age are considered older adults. As adults age into older adulthood, falling in the home becomes a very prevalent concern, more specifically, falling in the home after a total joint arthroplasty (TJA) or total joint replacement surgery (Liu et al., 2020). There are a number of factors that could contribute to an older adult falling in the home, especially after returning home from an acute care stay; however, there are many preventative procedures that could be done to decrease falls. A fall prevention plan can be implemented to patients in an acute setting as they prepare for discharge. These plans can include educational information on home safety along with activities to increase the patient's strength and stamina to prepare them for ambulating around their homes safely (Elliott & Leland, 2018).

Fall Risk Factors in Older Adults

Rates of Incidence of Falls

Falls are a common occurrence among older adults. According to Elliott and Leland (2018), one in four U.S. adults ages 65 years and older experience falls annually. Researchers in a meta-analysis of 12 studies examined the incidence of falls specifically among older adults following a TJA (Lo et al., 2018). Researchers reported that 52% of patients with a total knee arthroplasty (TKA) or total hip arthroplasty (THA) fell one month after being discharged from the hospital (Lo et al., 2018).

Fall Risk Factors

An older adult’s chance of falling is increased by various factors from impaired mobility and vision to improper footwear and hazards in their environment (Elliot & Leland, 2018). In a meta-analysis study conducted by Liu et al. (2020), researchers explored 14 studies to analyze factors associated with increased rates of falling in lower limb TJA patients over 60 years.

Pooling quantitative data from each selected study, researchers derived six primary risk factors for falling in older adult TJA patients: age, sex, weight, use of a walking aid, falls history, and comorbidity.

An increase in age was associated with an increased risk of falling (Centers for Disease Control and Prevention (CDC), 2017b; Liu et al., 2020). Patients who fell after TJA were an average of 3.2 years older than those who did not fall following their procedure. Next, females demonstrated higher rates of falling than men did in over half of the studies provided in Liu et al. (2020). Data also indicated that a patient's weight was positively correlated with their likelihood of falling; obesity increases an older adult's risk of falling by 31% (Liu et al., 2020; Mitchell et al. 2014). Conversely, the use of a walking aid was determined to be negatively correlated with the occurrence of falls. TJA patients with a history of falling experienced more falls than those who had not fallen in the past. Patients with a history of falls may experience distress or fear surrounding the incident, reducing their activity level in response (CDC, 2017b; Liu et al., 2020). Finally, patients who experience comorbid chronic health conditions, such as hypertension, chronic obstructive pulmonary disease, diabetes, cardiac disease, and depression are more likely to fall following TJA (CDC, 2017b; Liu et al., 2020). These risk factors for falling are exacerbated by post-TJA effects during the 6-12-month recovery period and include muscle loss, changes in joint proprioception, and postural instability, especially during standing and walking (Joshi et al., 2021; Liu et al., 2020).

Assessments to Identify Risk Factors

Evaluating older adults for fall risk is an important element in reducing falls in this population (Mayo Foundation for Medical Education and Research, 2018). To evaluate older adults' fall risk, there are three assessments commonly used, including the Five Times Sit to

Stand (5X STS) to assess strength, Single Leg Stance (SLS) to assess balance, and the Timed Up and Go (TUG) to assess gait. These assessments may be used before TJA surgeries (Mayo Foundation for Medical Education and Research, 2018).

Studies explored in the meta-analysis by Liu et al. (2020) included discussion of the Activities-specific Balance Confidence Scale (ABC). Researchers utilized this tool to measure patients' confidence in their balance, vestibular reactions, and mobility function. Additionally, results from the meta-analysis revealed a negative correlation between ABC Scale scores and falls after lower extremity joint replacement. Patients who received a higher balance confidence score on the ABC Scale experienced fewer falls than those who scored lower. These assessments help providers identify potential environmental risk factors in their older adult patients.

Environmental Factors that Impact Falls in Older Adults

Barriers

Environmental factors impact falls in older adults including barriers like home safety hazards and facilitators like assistive technology. Barriers include things that make it harder for an older adult to avoid falls after surgery. In general, the physical environment plays a big role in falls (Joshi et al., 2021). Environmental features within the lived area of the older adult's home can increase fears of falling and tripping while conducting day-to-day activities (Joshi et al., 2021). This fear can also contribute to a perceived notion of danger and can increase difficulty navigating the home space (Joshi et al., 2021). The most frequent places for falls to occur in the home are places that older adults spend the majority of their time in throughout the day like the kitchen, bedroom, or bathroom (Keglovits et al., 2020). Common themes of environmental factors that provide barriers after surgery include pets, uneven surfaces, clutter, cords or wires, the placement of items (i.e. placed too low or high), flooring material, rugs, narrow stairs and

hallways, inadequate lighting, and lack of railings throughout the space (Chippendale & Raveis, 2017; Joshi et al., 2021; Keglovits et al., 2020; Okoye et al., 2021).

While navigating the home, other environmental factors that contribute to falling include footwear, weakness and pain after surgery, and dizziness due to medications (Joshi et al., 2021). Because of the significance of environmental hazards on fall risk for older adults, it is important for an occupational therapist to assess the home for any safety hazards (Keglovits et al., 2020). One proactive strategy that an occupational therapist could use for older adults that will undergo a TJA would be to assess and modify the home before the patient undergoes surgery in order to promote a safe recovery and prevent hospital readmissions from falling (Joshi et al., 2021).

Facilitators

Environmental barriers can easily be overcome by using home modifications and assistive technology to increase safety, help reduce the risk of falls, and improve mobility (Joshi et al., 2021; Petersson et al., 2012). Along with reducing barriers, older adults who were unable to make environmental modifications leaned on care partners and family and friends to safely accomplish tasks (Joshi et al., 2021). Behavioral changes, like depending on others and increasing one's social environment, had a large impact on older adults' safety, while also increasing their participation in activities, overall life satisfaction, and health after surgery (Joshi et al., 2021; Petersson et al., 2012). Along with environmental factors, psychosocial factors also impact falls in older adults.

Psychosocial Factors that Impact Falls in Older Adults

Barriers

Psychological and social barriers which include the fear of falling, not paying attention to the environment around them, and thinking that they are less likely to fall at home, impact the

rate of falls in older adults. Fear of falling can affect social participation and has psychological effects like anxiety and depression and could even increase the likelihood of falling (Okoye et al., 2021). Embarrassment may also affect older adults' willingness to receive care and participate in activities after falling previously (Chippendale & Raveis, 2017). Additionally, not paying attention and walking too fast may lead to falling in older adults (Chippendale & Raveis, 2017). Lastly, older adults' perspectives of their own risk of falling can be a psychosocial barrier impacting falls at home. Shuman et al. (2019) conducted one-on-one interviews with nine older adults after their discharge that found, despite being identified by nursing staff as a moderate-to-high risk of falling, participants self-reported that they were at low risk of falling at home or in the community, which indicates that older adults may underestimate their own risks of falls.

Facilitators

Feeling healthy, having someone to rely on, and feeling at home positively affected the feeling of safety for older adults who are at risk for falls (Petersson et al., 2012). Results from a cross-sectional study of 54 total knee replacement (TKR) and total hip replacement (THR) patients conducted by Magklara and Morrison (2016) demonstrated that TKR and THR patients with family caregivers present at home were significantly less likely to fall post-surgery ($p=<0.05$). Additionally, participants who had no family caregiver at home were more likely to fear falling than those who did not have a family caregiver at home. Lastly, older adults report avoiding certain areas or environmental features that put them at an increased risk of falls (Chippendale & Raveis, 2017). All of these facilitators help older adults feel safe in their homes. Beyond facilitators, it is vital to consider the specific interventions that decrease fall risks in older adults.

Interventions for Fall Prevention

Education and Activity-Based Interventions

When considering fall prevention, it is essential to include interventions that contain an aspect of education and activity and provide practitioners with current and reliable evidence-based practice (EBP) education. There is strong evidence to support the implementation of patient education in conjunction with activity-based interventions to prevent falls in older adults (Elliot & Leland, 2018; Naseri et al., 2020). Specific educational topics could include footwear risk, energy conservation, assistive device usage, home modifications, fall recovery, medication management, nutrition, stress management, and community health education programs (Elliot & Leland, 2018; Horowitz et al., 2016). For example, a program could utilize the Home Safety Self-Assessment Tool to provide their patients with home safety knowledge to prevent home falls (Horowitz et al., 2016). This is a self-assessment tool that is designed for older adults to analyze the safety of their own home (Tomita et al., 2014). Beyond gathering initial data through assessments, specific interventions can be utilized to reach specific fall risk outcomes.

Specific Interventions

Evidence supports the utilization of specific activity-based interventions to increase the efficacy of fall prevention. For example, Pennsylvania implemented the Healthy Steps for Older Adults (HSOA) initiative that significantly lowered the incidence of falls by 17 percent (IRR=0.83) (Albert et al., 2014). Similarly, the Centers for Disease Control and Prevention (CDC) has presented the STEADI Initiative that provides a checklist for older adults to stay independent, includes ways to prevent falls, and screens for potential hazards in their homes (CDC, 2017a; Shuman et al., 2019). Specific exercises such as balance, strength, walking, multitask activities, and obstacle course activities significantly improve fall-related outcomes such as enhanced gait speed (Elliott & Leland, 2018). Additionally, Tai Chi and martial arts

enhance balance control, flexibility, and safe falling techniques (Liu et al., 2020; Chippendale & Raveis, 2017). Finally, lifestyle integrated functional exercise, which incorporates exercise into everyday activities, effectively reduces fall risks (Elliott & Leland, 2018). Before considering educational materials or activity-based interventions, providing the practitioners with relevant, reliable, and current evidence-based education is crucial to optimize patient outcomes.

Provider Education

Evidence supports providing EBP training and education to occupational therapists to improve their adherence to professional guidelines and improve overall care. Education must be provided with an interdisciplinary approach (Wheeler et al., 2018); however, there is a lack of condition-specific assessments and fall prevention EBP resources that providers do not routinely use (Johnston et al., 2010; Shuman et al., 2019). More research and implementation of education for healthcare providers is needed to promote adherence to evidence-based protocols. This could include implementing evidence-based training modules within all practice settings in occupational therapy (Wheeler et al., 2018). Overall, evidence supports the utilization of education, activity-based interventions, and increased consistency of EBP in occupational therapy.

Conclusion

Older adults face many challenges from the normal aging process, and these challenges can be increased when recovering from a total joint replacement surgery. Risk factors, environmental factors, psychological factors and interventions all play a role in fall prevention. By decreasing environmental and psychological barriers, and increasing interventions, older adults can have a decreased risk of falls. From our findings it was concluded that fall prevention, interventions and education all reduced the risk of falls resulting in an increased quality of life

for older adults after surgery. Fall prevention after a total joint replacement surgery is a growing area of evidence-based practice and it can be utilized heavily in the occupational therapy profession.

Executive Summary

Evidence-based practice improves the overall quality of care provided by practitioners as research is done to improve treatments and interventions within the healthcare field. The Choosing Wisely Campaign® starts this conversation with the practitioners. The evidence-based practice question that guided the research below included fall prevention interventions in older adults post arthroplasty in sub-acute care. Fall prevention plans for older adults that have undergone total joint replacement surgery should account for the patient's home to create a safe space for them to heal, include education on falls and how to prevent them, and incorporate activities for the patient to take part in before discharge. The information found on fall prevention plans in older adults post joint replacement is important to know as providers treat patients that have undergone this surgery. Though there has been significant research conducted on fall prevention, this research may be limited due to many factors such as sample sizes and difficulty collecting data. In the future, research should continue to be done to further prevent older adults from falling in the home through specific interventions.

Take Home Message

A range of biological, psychological, and environmental risk factors contribute to falls in older adults, including patient demographic characteristics, fall history, chronic disease comorbidity, mobility, and physical obstacles in the environment. It is important to consider that most falls occur within an older adult's residence due to environmental hazards. Psychological and social risk factors are also included if older adults do not feel healthy, have someone to rely on, and more. An absence of psychological and social protective factors may increase anxiety and the fear of falling and decrease social participation in this population.

Advocacy, education, interventions, and training can lower the rates of falls. Fall prevention resources must utilize a mixture of education and activity-based intervention. Also, providing healthcare providers with adequate resources and training about the most current and reliable evidence-based interventions will enhance overall patient care. By making sure interventions and healthcare providers meet the needs and are aware of the fall risk factors for older adults, the rate of falls can be addressed appropriately and timely.

Findings

Data derived from our extensive literature review indicates that falls are common among older adults who have recently undergone joint replacement surgeries. Age-related musculoskeletal changes are compounded upon muscle deconditioning that follows total joint arthroplasty (TJA). This relationship leads to impaired posture, balance, and stability, each of which increases the risk of falling.

The effects of TJA pose various challenges as older adults return to navigating their home environments. Occupational therapy practitioners can assess obstacles in the home and modify them to create facilitators to prevent falls. Awareness of patients' home environment is crucial for health professionals to consider for this older adult population.

Not only do barriers to fall prevention exist within the environment, but a fear of falling also has implications for social participation and psychological effects such as anxiety and depression for older adults. Interventions and services can be implemented more effectively, and falls can be decreased if the prerequisites of feeling healthy, having someone to rely on, and feeling at home can be met.

Educational content for patients that are at risk of falls can consist of online resources, assistive device explanations, or community-based health programs. Exercise-based

interventions that target balance, strength, and flexibility also substantially reduce the risk of falls in older adults.

Before considering educational materials or specific interventions, healthcare providers must have the knowledge and skills to implement these practices. Providing evidence-based training to providers will increase the likelihood of practitioners using evidence-based practice interventions, identifying fall risk factors, and adherence to clinical guidelines.

Strengths and Limitations

An extensive search of a breadth of databases and professional organizations was conducted to obtain our evidence. Overall, there was a good balance of level I, II, and III evidence included in the more than forty articles selected for appraisal. Another strength of the existing evidence was the research that identified cultural, environmental, and psychological risk factors of falls for older adults. Finally, the current evidence provided home safety hazard checklists beneficial for occupational therapy practitioners when conducting home assessments.

Limitations included limited occupational therapy specific research, small sample sizes, and low generalizability. When a study has a small sample size, there is a greater chance for sampling errors to occur. Several studies had low generalizability due to selecting patients from one hospital or assisted living facility, so the results may not represent the entire population. Existing literature includes limited evidence on fall prevention specific to the role of occupational therapy in sub-acute settings.

Implications and Recommendations

It is recommended to continue producing and researching condition-specific assessments and interventions for the future. To identify those at risk of falls, healthcare providers should evaluate a breadth of patient characteristics beyond physical functioning. Providers may

effectively gather baseline measures of older adult patients' gait, balance, and strength using assessments such as the Activities-specific Balance Confidence Scale (ABC) or Timed Up and Go (TUG). There is a lack of adherence to evidence-based protocols, so it is recommended to implement more opportunities such as virtual training modules for providers to gain knowledge about the most relevant and reliable evidence. This will improve adherence to professional guidelines and improve the overall quality of care. This being said, providers will be more likely to implement evidence-based assessments and interventions with adequate training and knowledge of the supporting evidence.

Future Considerations

Before assessing an older adult's environment for safety, occupational therapy practitioners need to understand what factors affect falling. Occupational therapy practitioners should consider how psychological, social, and cultural factors contribute to falls, not just physical aspects. In addition, more research should be done on proactive assessments and standardized mechanisms to prevent falls. Lastly, other areas of future research include analyzing the effectiveness of assessments and interventions on specific populations of older adults. Examples of particular interventions that need more research include integrating education into the intervention process and less popular interventions like water-based exercise or guided meditation and relaxation.

Conclusion

An older adult's home environment, psychological well-being, and increased risk factors after surgery can impact their quality of life and increase their risk of falls after undergoing joint replacement surgery. Decreasing falls after surgery is an important goal for occupational therapy practitioners. This goal can be achieved by decreasing environmental and psychological barriers,

implementing a fall prevention plan, and educating older adults and their providers on how to prevent falls.

Evidenced-based Resources

Table 1

Government and Major Foundation Resources

Title	Description	Source
Mayo Clinic	The Mayo Clinic, based in Rochester MN, is a nonprofit health care organization that's mission has a focus on education, research, and providing patient centered care to all who need it (Mayo Clinic, 2021). This will be relevant to our research through providing background information on topics being researched.	https://www.mayoclinic.org/about-mayo-clinic
Centers for Disease Control and Prevention (CDC)	The Centers for Disease Control and Prevention (CDC, n.d.) expends consistent effort to promote health and safety from diseases across the United States. The CDC addresses both curable or preventable diseases. This source provides reliable background information that will allow us to gain a foundation to understand the experience of older adults and the prevalence of injury from falls among the population.	https://www.cdc.gov
HealthyPeople 2030	The US Department of Health and Human Services and the Office of Disease Prevention and Health Promotion are the agencies that back Healthy People 2030 (ODPHP, 2021). HealthyPeople 2030 aims to reduce health problems among older adults. The initiative includes focus areas of injury prevention and osteoporosis, each of which are elements that relate to falls prevention as it is addressed in our EBP question. This source will provide intervention strategies and ideas.	https://health.gov/healthypeople/objectives-and-data/browse-objectives/older-adults
National Council on Aging	The National Council on Aging provides resources for aging adults. They have information on insurance, Medicare, health conditions and more. They have a goal to improve the lives of 40 million Older Adults by 2030. This website could provide information specifically related to older adults, like home modifications, fall prevention, or certain precautions after surgery (NCOA, n.d.).	https://www.ncoa.org/older-adults

World Health Organization	The World Health Organization is an international public health organization created by the United Nations. WHO was founded in 1948 and has headquarters in Switzerland. They have a goal to improve health outcomes throughout the world (WHO, n.d.). From this source, we could find health promotion ideas for fall prevention in older adults, since the WHO is dedicated to improving health outcomes.	https://www.who.int

Table 2

Occupational Therapy Resources

Title	Description	Source
American Journal of Occupational Therapy (AJOT)	The AJOT is published by the AOTA. It is peer-reviewed and covers research, Occupational therapy practice, and Occupational therapy based medical issues. They publish the journal bimonthly (AOTA, n.d.). This source will help our group identify OT-specific fall prevention and home safety interventions for older adults in a subacute setting. Also, this journal is published bimonthly, indicating that research published in this journal is constantly being updated and assessed, which will aid us when we are looking for current interventions regarding our question.	https://www.aota.org/publications-news/americanjournalofoccupationaltherapy.aspx
Physical and Occupational Therapy In Geriatrics	The Physical and Occupational Therapy in Geriatrics journal publishes research that is peer reviewed on geriatric practices, rehabilitation, and occupational therapy. This journal will provide our group members with articles about the older adult population and specific OT interventions.	https://www.tandfonline.com/toc/ipog20/current
American Occupational Therapy Foundation (AOTF)	The AOTF supports OT research and increases public understanding of OT. AOTF publishes a quarterly journal: OTJR (AOTF, n.d.). This source can help us identify how OT can help older adults recovering from a joint replacement and trying to return to their homes. AOTF values and wants others to know about the connection between occupations and health. Our group can relate this to our EBP question because we are trying to find fall prevention and home safety interventions after joint replacement that are beneficial (health), hopefully increasing independence and participation in occupations.	https://www.aotf.org/

World Federation of Occupational Therapists (WFOT)	WFOT is a voice for and represents OTs around the world. They set the standard for practice. With WHO the organization works to improve overall world health (WFOT, 1980). This source is relevant to our question because WFOT works alongside WHO. WHO recognizes the impact of falls on the older adults population and sees falling as a public health issue. Knowing this, we can use WFOT to understand the standards for fall intervention and OT practice.	https://www.wfot.org
American Occupational Therapy Association (AOTA)	The AOTA aims to improve the quality of occupational therapy services (AOTA, n.d.). The AOTA website will help our group navigate specific OT resources and education for the older adult population we are researching.	https://www.aota.org/

Table 3

Interdisciplinary Journals, Databases, and Professional Associations

Title	Description	Source
CINAHL Complete	CINAHL includes a variety of published articles that relate to nursing, health education, OT, PT, and more. There are full text options available on the site and through our university. Some of these articles date back to 1937. Most of the articles are published in English and are peer reviewed.	https://www.ebsco.com/products/research-databases/cinahl-complete
Physical Therapy & Rehabilitation Journal (PTJ)	This is a database for Physical Therapy's publications which is similar to AJOT. The database includes more than 100,000 articles. The database includes full text and PDF options. A membership may be required to access articles.	https://academic.oup.com/ptj/pages/About
PubMed	PudMed includes over 30 million biomedical sources that include literature from MEDLINE and science journals and books. These sources aim to provide someone with literature whose overarching goal is to improve health- both personally and globally. Being that this source focuses on improving health among the population this will be a great way to find articles that relate to improving the health of older adults, which relates to our EBP population area.	https://pubmed.ncbi.nlm.nih.gov/
PsycInfo & PsycArticles	PsycInfo & PsycArticles is a psychology research database. This source will be a great resource to look at older adults and psychology and apply it to our EBP of older adults and preventing falls. We could use the psychology resources to see how to reduce psychological barriers in older adults that cause falls.	https://www.proquest.com

Journal of Aging and Health	The Journal of Health and Aging compiles peer reviewed, scholarly articles for disciplines of Allied Health, Psychology, Public Health, Social Policy and Work, Epidemiology, Health Services Research, Sociology, and Nursing. This source and its emphasis on gerontology will provide information that is relevant to the unique experiences of older adults, the target population of our EBP question. The information provided in this journal is geared toward allied health, a discipline which includes the role of occupational therapy.	https://journals.sagepub.com/home/jah

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Appendix A. Initial Appraisals

Primary Research Studies

	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: Retrospective
APA Reference	Wheeler, E., Coogle, C. L., Fix, R. C., Owens, M. G., & Waters, L. H. (2018). Physical and occupational therapy practice improvement following interprofessional evidence-based falls prevention training. *Journal of Allied Health*, *47*(1), 9–18.
Abstract	"AIMS: Evaluate changes in physical therapy (PT) and occupational therapy (OT) practice following evidence-based practice (EBP) interprofessional modules that teach assessments and interventions to reduce falls in community-dwelling older adults. METHODS: Medical records of post-fall patients in three Programs of All-Inclusive Care for the Elderly (PACE) sites were analyzed to assess differences in documented falls and the OT and PT use of EBP assessment and interventions implemented following fall prevention training. RESULTS: In training year 1, PT demonstrated a 34.6% practice improvement in risk assessments performed ($z=3.0$, $p<0.005$). In training year 2, PT demonstrated a 66.7% practice change in the implementation of EBP interventions ($z=2.1$, $p<0.05$) and OT demonstrated a 22.2% practice improvement in the implementation of recommended EBP interventions ($z=2.0$, $p<0.05$). In training year 3, OT achieved a 6.8% increase in the execution of home environment modifications ($z=2.0$, $p<0.05$), and PT demonstrated a 23.3% practice improvement in the implementation of recommended EBP interventions ($z=3.1$, $p<0.005$). CONCLUSION: The delivery of EBP assessment and intervention training modules for falls prevention resulted in PT and OT practice changes and improved adherence to published guidelines." (p. 9)
Author	Credentials: PT, DPT , M.S. Position and Institution: Direction of Clinical Education and Admissions at VCU College of Health Professions Publication History in Peer-Reviewed Journals: Extensive
Publication	Type of publication: Scholarly Peer-Reviewed Journal Publisher: Association of Schools of Allied Health Professions Other: Journal of Allied Health; Washington
Date and Citation History	Date of publication: Spring 2018 Cited By: 8
Stated Purpose or Research Question	"The purpose of this study was to evaluate PT and OT practice change following instruction in evidence-based practice (EBP) interprofessional teaching modules focused on EBP assessment and interventions shown to reduce falls in community-dwelling older adults." (p. 10)

Author's Conclusion	"This study demonstrates that PT and OT provide more fall risk assessments and interventions after robust EBP fall prevention training. Increased knowledge of fall prevention guidelines and recommendations translate to PT and OT's increased identification and documentation of risk factors and interventions." (p. 17)
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: Includes both an interdisciplinary look at both OT and PT interventions in fall risk. Shows how purposeful these interventions can be to reduce falls/fall risk.
Overall Quality of Article	Overall Quality of Article: Good Rationale: Well established author with a multitude of other articles published. Reputable publisher. Thoroughly explains limitations and room for improvement.

	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: non-randomized clinical trial
APA Reference	Albert, S. M., King, J., Boudreau, R., Prasad, T., Lin, C. J., & Newman, A. B. (2014). Primary prevention of falls: Effectiveness of a statewide program. American Journal of Public Health, 104(5), e77–e84. https://doi.org/10.2105/AJPH.2013.301829
Abstract	"Objectives. We examined a population-wide program, Pennsylvania's Healthy Steps for Older Adults (HSOA), designed to reduce the incidence of falls among older adults. Older adults completing HSOA are screened and educated regarding fall risk, and those identified as being at high risk are referred to primary care providers and home safety resources. Methods. From 2010 to 2011, older adults who completed HSOA at various senior center sites (n = 814) and a comparison group of older adults from the same sites who did not complete the program (n = 1019) were recruited and followed monthly. Although participants were not randomly allocated to study conditions, the 2 groups did not differ in fall risk at baseline or attrition. We used a telephone interactive voice response system to ascertain the number of falls that occurred each month. Results. In multivariate models, adjusted fall incidence rate ratios (IRRs) were lower in the HSOA group than in the comparison group for both total (IRR = 0.83; 95% confidence interval [CI] = 0.72, 0.96) and activity-adjusted (IRR = 0.81; 95% CI = 0.70, 0.93) months of follow-up. Conclusions. Use of existing aging services in primary prevention of falls is feasible, resulting in a 17% reduction in our sample in the rate of falls over the follow-up period." (p. 77)
Author	Credentials: PhD, MA, MSPH Position and Institution: Professor, Behavioral and Community Health Sciences at University of Pittsburgh Publication History in Peer-Reviewed Journals: Extensive
Publication	Type of publication: Scholarly peer-reviewed journals Publisher: Supported by CDC (cooperative agreement and grant) and NIH (grant) Other:: American Public Health Association
Date and Citation History	Date of publication: May 2014 Cited By: 56
Stated Purpose or Research Question	"We report the results of a statewide evaluation of HSOA, which uses the state's network of providers of aging services in its primary prevention efforts" (p. 77)
Author's Conclusion	"Older adults who completed the HSOA program, a statewide primary prevention effort focusing on falls, had a significantly lower incidence of falls than a similar comparison group. In multivariate models, completion of HSOA was associated with a lower rate of falls (IRR = 0.83, a significant reduction of

	about 17%), as well as a reduced percentage of falls (with 6%–8% fewer people falling than in the comparison group, although this difference was not significant), in a median of 7.5 months of follow-up after the baseline assessment. This reduction in rate of falls is similar to estimates derived from a meta-analysis of randomized controlled trials focusing on fall prevention (relative risk = 0.85).” (p. 82)
Overall Relevance to your EBP Question	Overall Relevance of Article: Moderate Rationale: Provides one interventions that was implemented statewide to reduce the risk of falls in older adults. Our EBP question is about fall prevention in older adults and purposeful interventions. This will give us some ideas for purposeful interventions that have research behind it.
Overall Quality of Article	Overall Quality of Article: Moderate Rationale: not randomized, all within one state so can it be generalized to other states, established author, within 10 years

	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: Cross-sectional study through a questionnaire
APA Reference	Chippendale, T., & Raveis, V. (2017). Knowledge, behavioral practices, and experiences of outdoor fallers: Implications for prevention programs. *Archives of Gerontology and Geriatrics, 72*, 19–24. https://doi.org/10.1016/j.archger.2017.04.008
Abstract	"Objective. Although the epidemiology and prevention of falls has been well studied, the focus has been on indoor rather than outdoor falls. Older adults' knowledge of outdoor risk factors and their outdoor fall prevention practices have not been examined. To fill this gap, and to inform the development of a prevention program, we sought to explore the experiences and fall prevention knowledge and practices of older adults who had sustained an outdoor fall. Methods. A cross-sectional study using random digit telephone dialing was used to survey community-dwelling seniors (N = 120) across the five boroughs of New York City. We used the Outdoor Falls Questionnaire (OFQ), a valid and reliable tool as the survey instrument. Perceived outdoor fall risks, strategies used for prevention, and outdoor fall experiences were examined. SPSS version 21 was used for descriptive analysis of participant characteristics and to determine frequencies of perceived outdoor fall risks and strategies used for prevention. Phenomenological analysis was used with the qualitative data. Qualitative and quantitative data were analyzed separately and a mixed methods matrix was used to interpret and integrate the findings. Results. Analysis revealed diverse unmet education and training needs including the importance of using single vision glasses, understanding the fall risks associated with recreational areas and parking lots, safe outdoor walking strategies, safe carrying of items on the level and uneven surfaces, as well as when walking up and downstairs, and safety in opening/closing doors. Conclusions. Study findings are informative for outdoor fall prevention programs as well as practice." (p. 19)
Author	Credentials: PhD, OTR/L Position and Institution: Associate professor of OT at New York University, Steinhardt School of Culture Publication History in Peer-Reviewed Journals: extensive
Publication	Type of publication: scholarly peer-reviewed journal Publisher: American Occupational Therapy Association (AOTA) Other: Official journal of the AOTA
Date and Citation History	Date of publication 11/1/2018 Cited By: 0
Stated Purpose or Research Question	"we sought to explore the experiences and fall prevention knowledge and practices of older adults who had sustained an outdoor fall" (p. 19)

Author's Conclusion	"Results reveal a number of unmet education and training needs for outdoor fall prevention among community-dwelling older adults. Content of prevention programs should include information on outdoor fall risks, action planning for the adoption of prevention behaviors, and training in safe performance of everyday activities including but not limited to opening and closing doors, navigating stairs, and carrying items on level and uneven surfaces." (p. 23)
Overall Relevance to your EBP Question	Overall Relevance of Article: Moderate Rationale: This article focuses both on older adults and fall prevention which directly correlates to our population in our EBP question. However, the article more focuses on the need for more education and training surrounding fall prevention outdoors instead of providing specific interventions. The article did state a few areas in which education and training should focus on.
Overall Quality of Article	Overall Quality of Article: Good Rationale: Publication within last 10 years, peer-reviewed, acknowledged limitations, not widely cited by others

	Overview of Article
Type of article	Overall Type: Primary Research Study Mixed Methods Specific Type: "We invited study participants who took part in our previous EASY study" (p. 115).
APA Reference	Fleig, L., McAllister, M. M., Chen, P., Iverson, J., Milne, K., McKay, H. A., Clemson, L., & Ashe, M. C. (2016). Health behaviour change theory meets falls prevention: Feasibility of a habit-based balance and strength exercise intervention for older adults. *Psychology of Sport and Exercise, 22,* 114–122. https://doi.org/10.1016/j.psychsport.2015.07.002
Abstract	"Objectives: Habit formation is a proposed mechanism for behaviour maintenance. Very few falls prevention studies have adopted this as an intervention framework and outcome. Therefore, we tested feasibility of a theory-based behaviour change intervention that encouraged women to embed balance and strength exercises into daily life routines (e.g., eating, self-care routines). Design: The EASY LiFE study was a mixed-methods, 4-month feasibility intervention that included seven group-based sessions and two telephone calls. Main outcome measures: We obtained performance-based (i.e., Short-Physical-Performance-Battery) and psychological self-report measures (i.e., intention, self-efficacy, planning, action control, habit strength, quality of life) from 13 women at baseline (T1) and 4-month follow-up (T2). We applied the Framework-Method to post-intervention, semi-structured interviews to evaluate program content and delivery. Results: In total, 10 of 13 women completed the program (Mage 1⁄4 66.23, SD 1⁄4 3.98) and showed changes in their level of action control [mean differenceT1"T2 1⁄4 1.7, 95% CI ("2.2 to "0.8)], action planning [meandifferenceT1"T2 1⁄4 0.8, 95% CI ("1.1 to "0.2)], automaticity [mean differenceT1"T2 1⁄4 2.5, 95% CI ("3.7 to "1.2)], and exercise identity [mean differenceT1"T2 1⁄4 2.0, 95% CI ("3.2 to "0.8)]. Based on the Theoretical Domains Framework we identified knowledge, behavioural regulation, and social factors as important themes. For program delivery, dominant themes were engagement, session facilitators and group format. Conclusion: The theory-based framework showed feasibility for promoting lifestyle integrated balance and strength exercise habits. Using activity and object-based cues may be particularly effective in generating action and automaticity" (p. 114).
Author	Credentials: Ph.D. Position and Institution: Centre for Hip Health and Mobility, Vancouver, Canada Department of Family Practice, The University of British Columbia, Vancouver, Canada Health Psychology, Freie Universitat Berlin, Berlin, Germany

	Publication History in Peer-Reviewed Journals: Moderate 11
Publication	Type of publication: peer-reviewed Publisher: Elsevier Ltd.
Date and Citation History	Date of publication: 17 July 2015 Cited By:57
Stated Purpose or Research Question	"Specifically, our objective was to test feasibility of the EASY-LiFE program delivery, and acceptance and utilization of the program content (e.g., uptake of behaviour change techniques) by study participant" (p. 115).
Author's Conclusion	"In summary, a group-based, lifestyle-integrated exercise program that targets balance and strength was well-received, feasible to deliver, and can potentially achieve uptake of self-regulatory strategies (e.g., event- and activity-based action planning), context-dependent behaviour repetitions, and increases in automaticity and self-identity among older women. Theory-based principles of habit formation provide an acceptable and promising foundation from which to design larger scale balance and strength exercise programs for this age group, in future" (p.121).
Overall Relevance to your EBP Question	Overall Relevance of Article: Moderate Rationale: This program may be good to use for this population. This program could help with balance and improve self-identity. Which are crucial aspects for recovery and would be relevant for our project.
Overall Quality of Article	Overall Quality of Article: Moderate Rationale: The author seems to be a trusted researcher in this area. This article was published within the past 10 years. Additionally, she has/had a position at the Centre for Hip Health and Mobility, Vancouver, Canada, which is relevant to our EBP question.

	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: Quantitative, pre/post test, single group
APA Reference	Krastanova, M.S., Ilieva, E.M., & Vacheva, D.E. (2017). Rehabilitation of patients with hip joint arthroplasty (late post-surgery period - hospital rehabilitation). *Folia Medica*, *59*(2), 217-221. https://doi:10.1515/folmed-2017-0016
Abstract	"Background: Hip joint replacement (endoprosthesis, alloplasty) has become one of the most frequent surgery interventions of the 20th century. Aim: To conduct rehabilitation therapy in the late post-surgery period of hospital rehabilitation (45 days after surgery), to track patients' progress and measure the results. Materials and methods: One hundred and fifty-two patients with hip joint endoprosthesis were included in the study. All underwent surgery and rehabilitation at the Department of Clinical Rehabilitation of the Physical and Rehabilitation Medicine Clinic at Doctor G. Stranski University Hospital, Pleven. Kinesitherapy included therapeutic massage, isometric exercises for gluteal and hip muscles, isotonic exercises for the hip and the knee joint, breathing exercises, analytical gymnastics, exercises for balance and posture stability; gait control, exercises with gym equipment; occupational exercises included all activities of daily living (ADL) that were practiced at home; treatment with performed physical factors included applying magnetic field, interferential current therapy, electrostimulation of the m. quadriceps femoris and the gluteal muscles. Results: The scores from the pain visual analog scale (VAS), the muscle strength test and the test for the movement volume of the hip joint were obtained at the beginning and at the end of the rehabilitation process and stored in an individual file for each patient. Conclusion: The results of the present study suggest that the complex rehabilitation program (kinesitherapy, performed physical factors and occupational therapy) can result in a considerably faster recovery and ensures that patients reach optimal functional results" (p. 217).
Author	Credentials: PhD Position and Institution: Associate Professor in the Department of Physical Medicine, Rehabilitation, Ergotherapy, and Sport and the Medical University of Pleven Publication History in Peer-Reviewed Journals: 25+ = extensive
Publication	Type of publication: Peer-reviewed Publisher: Folia Medica Other: It is a peer reviewed interdisciplinary medical journal
Date and Citation History	Date of publication: 2017 Cited By: 15
Stated Purpose or Research Question	"The aim of this study was to assess the effect of a complex rehabilitation program (CRP) consisting of kinesitherapy (KT), ergotherapy (ET) and physical agent modalities, applied 45 days post-surgery on inpatients at Hospital Rehabilitation Department (HRD)" (p. 217).

Author's Conclusion	"Patients report improved satisfaction from the achieved results compared to their highest pre-surgery expectations. A positive impact is observed on patients' autonomy in activities of daily living, as well as decreased depression state" (p. 220).
Overall Relevance to your EBP Question	Overall Relevance of Article: Moderate Rationale: This demonstrates that rehabilitation programs (an intervention) result in faster recovery post-hip joint replacement but is not as focused on OT as our research question is.
Overall Quality of Article	Overall Quality of Article: Moderate Rationale: Published within the last 5 years. Information could have been lost in translation from Bulgarian to English. Figures and tables utilized to show results.

	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: Quasi-experimental, experimental and control groups
APA Reference	Demir, S.G. & Erdil, F. (2013). Effectiveness of home monitoring according to the Model of Living in hip replacement surgery patients. *Journal of Clinical Nursing, 22*(9-10), 1226-1241. https://doi.org/10.1111/jocn.12255
Abstract	"Aims and objectives: To evaluate the effectiveness of home monitoring according to the Model of Living in hip replacement surgery patients. Background: Hip replacement surgery is important for increasing the quality of life of patients. After these operations, patients may encounter many problems having an impact on their activities of daily living. Design: Quasi-experimental. Methods: Sixty patients were included in the study: 30 in the experimental group and 30 in the control group. Patients in the control group received the existing care provided in the hospital. In addition to existing care, patients in the experimental group received training and counselling according to the Model of Living from the time of admission to the clinic. After discharge, home monitoring was performed in the 1st and 6th weeks for control group patients and in the 1st, 3rd and 6th weeks for experimental group patients. Statistical analysis was carried out using percentage calculations, mean, median, chi-square test, Fisher's exact test, likelihood ratio test, Mann–Whitney *U*-test, Kruskal–Wallis test, anova for repeated measures, independent-sample *t*-test, Friedman test, McNemar test and McNemar–Bowker tests. Results: It was found that the experimental group patients' knowledge scores increased, they were more independent in performing activities of daily living, and they encountered less problems in the 1st and 6th week after discharge. Conclusion: As a result, it can be claimed that by means of providing training, counselling and home monitoring hip replacement surgery patients according to the Model of Living, the level of knowledge of patients on activities of daily living increased, they were more independent in daily living activities, and they experienced less problems. Relevance to clinical practice: The use of the Model of Living in the home monitoring of patients who have undergone hip replacement surgery could assist in focusing on the problems most frequently experienced by patients in postoperative care and achieving effective solutions."
Author	Credentials: MsN, PhD Position and Institution: Instructor, Faculty of Health Science Department of Nursing, Besevler, Gazi University, Ankara, Turkey Publication History in Peer-Reviewed Journals: 25+ = extensive
Publication	Type of publication: Peer-reviewed Publisher: Journal of Clinical Nursing Other: NA

Date and Citation History	Date of publication: 2013 Cited By: 11
Stated Purpose or Research Question	"To evaluate the effectiveness of home monitoring according to the Model of Living in hip replacement surgery patients" (p. 1226).
Author's Conclusion	"As a result, it can be claimed that by means of providing training, counselling and home monitoring hip replacement surgery patients according to the Model of Living, the level of knowledge of patients on activities of daily living increased, they were more independent in daily living activities, and they experienced less problems" (p. 1240).
Overall Relevance to your EBP Question	Overall Relevance of Article: Moderate Rationale: This article discusses how training, counseling, and home monitoring after hip replacement can positively impact patients' knowledge of ADLs. These are examples of interventions that can be utilized as discussed in our question. It is not very focused on OT and the study was done in Turkey
Overall Quality of Article	Overall Quality of Article: Good Rationale: The article is less than 10 years old, a reputable journal, medium size group studied

	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: Exploratory research, pre/post test for quantitative data, 2 groups
APA Reference	Horowitz, B.P., Almonte, T., & Vasil, A. (2016). Use of the Home Safety Self-Assessment Tool (HSSAT) within community health education to improve home safety. *Occupational Therapy in Health Care, 30*(4), 356-372. https://doi.org/10.1080/07380577.2016.1191695
Abstract	"This exploratory research examined the benefits of a health education program utilizing the *Home Safety Self-Assessment Tool* (*HSSAT*) to increase perceived knowledge of home safety, recognition of unsafe activities, ability to safely perform activities, and develop home safety plans of 47 older adults. Focus groups in two senior centers explored social workers' perspectives on use of the *HSSAT* in community practice. Results for the health education program found significant differences between reported knowledge of home safety (p = .02), ability to recognize unsafe activities (p = .01), safely perform activities (p = .04), and develop a safety plan (p = .002). Social workers identified home safety as a major concern and the *HSSAT* a promising assessment tool. Research has implications for reducing environmental fall risks" (p. 356).
Author	Credentials: PhD, OTR/L, LMSW, BCG, FAOTA Position and Institution: Associate Professor, Occupational Therapy Department, York College-CUNY Publication History in Peer-Reviewed Journals: 25+ = extensive
Publication	Type of publication: peer-reviewed Publisher: Occupational Therapy in Health Care Other: NA
Date and Citation History	Date of publication: 2016 Cited By: 11
Stated Purpose or Research Question	"This exploratory research examined the benefits of a health education program utilizing the Home Safety Self-Assessment Tool (HSSAT) to increase perceived knowledge of home safety, recognition of unsafe activities, ability to safely perform activities, and develop home safety plans of 47 older adults" (p. 356).
Author's Conclusion	"Despite its limitations, quantitative findings encourage further evaluation of use of the freely available HSSAT within community health education to assess its benefits to enable older adults to develop problem-solving skills to reduce environmental fall hazards, including design of individualized home safety plans to decrease fall risks. Social work focus group findings support potential benefits of the HSSAT in community practice with older adults but need for HSSAT modification to better address home safety needs of older adults residing in urban apartments" (p. 370).
Overall Relevance to	Overall Relevance of Article: Moderate/Good

your EBP Question	Rationale: This article reviews how to possibly enable older adults to develop skills to reduce their fall risk, which includes home modifications/safety. It is also focused on OT. However, it doesn't discuss specifically older adults after a joint replacement.
Overall Quality of Article	Overall Quality of Article: Moderate Rationale: written within the last 5 years, reputable journal, tables utilized to show results, but small study

	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: single group, pre/post longitudinal, self report questionnaire
APA Reference	Delbaere, K., Close, J.C.T., Mikolaizak, A.S., Sachdev, P. S., Brodaty, H., & Lord, S.R. (2010). The Falls Efficacy Scale International (FES-I). A comprehensive longitudinal validation study. *Age and Ageing, 39*(2), 210-216. https://doi.org/10.1093/ageing/afp225
Abstract	"Objective: this study aimed to perform a comprehensive validation of the 16-item and 7-item Falls Efficacy Scale International (FES-I) by investigating the overall structure and measurement properties, convergent and predictive validity and responsiveness to change. Method: five hundred community-dwelling older people (70–90 years) were assessed on the FES-I in conjunction with demographic, physiological and neuropsychological measures at baseline and at 12 months. Falls were monitored monthly and fear of falling every 3 months. Results: the overall structure and measurement properties of both FES-I scales, as evaluated with item response theory, were good. Discriminative ability on physiological and neuropsychological measures indicated excellent validity, both at baseline (n = 500, convergent validity) and at 1-year follow-up (n = 463, predictive validity). The longitudinal follow-up suggested that FES-I scores increased over time regardless of any fall event, with a trend for a stronger increase in FES-I scores when a person suffered multiple falls in a 3-month period. Additionally, using receiver-operating characteristic (ROC) curves, cut-points were defined to differentiate between lower and higher levels of concern. Conclusions: the current study builds on the previously established psychometric properties of the FES-I. Both scales have acceptable structures, good validity and reliability and can be recommended for research and clinical purposes. Future studies should explore the FES-I's responsiveness to change during intervention studies and confirm suggested cut-points in other settings, larger samples and across different cultures."
Author	Credentials: PhD Position and Institution: Principal Research Scientist; Falls and Balance Research Group at Prince of Wales Medical Research Institute, Department of Experimental-Clinical and Health Psychology faculty, Department of Rehabilitation Sciences and Physiotherapy faculty Publication History in Peer-Reviewed Journals: 25+ = extensive
Publication	Type of publication: Peer reviewed Publisher: Age and Ageing Other: Age and Ageing is the journal of the British Geriatrics Society
Date and Citation History	Date of publication: 2010 Cited By: 655

Stated Purpose or Research Question	"This study aimed to further evaluate the psychometric properties of the FES-I... We explored convergent and predictive validity of the scale by investigating the discriminative ability of the FES-I on a range of physiological and neuropsychological measures. A longitudinal follow-up allowed us to explore the stability over time and responsiveness to change of the FES-I" (p. 211).
Author's Conclusion	"The measurement properties of the 16- and 7-item FESI scales were good when assessed in 500 older community living people. Both FES-I scales had excellent validity with regard to external physiological and neuropsychological measures. Both 16-item and 7-item FES-I scales can be recommended for research and clinical purposes" (p. 215).
Overall Relevance to your EBP Question	Overall Relevance of Article: Poor Rationale: The FES-I is a type of assessment that could be used for the population of our question focus, however this particular study does not assess specifically older adults post-joint replacement or have an OT focus.
Overall Quality of Article	Overall Quality of Article: Good Rationale: a little over 10 years old but cited an extensive amount, reputable journal, large study

	Overview of Article
Type of article	Overall Type:Primary Research Study qualitative Specific Type: This qualitative study involved purposefully recruiting nine older adults and four caregivers at an assisted-living facility in Southeast Nigeria. Focus group discussions were conducted separately for older adults and the caregivers.
APA Reference	Okoye, E. C., Akosile, C. O., Maruf, F. A., Onwuakagba, I. U., & Mgbeojedo, U. G. (2021). Falls and fear of falling among older adults in an assisted-living facility: A qualitative and foundational study for intervention development in a developing country. *Archives of Gerontology and Geriatrics*, *94*, 1-8. https://doi.org/10.1016/j.archger.2021.104375
Abstract	"Background: Falls and fear of falling (FOF) have serious adverse effects for older adults. Culturally-specific and environmentally-tailored interventions may help address the problems of falls and FOF. No such interventions are however available for use in the African context. Objective: To explore falls and FOF among older adults in an assisted-living facility, as a foundation for developing interventions to address falls and FOF. Methods: This qualitative study involved purposefully recruiting nine older adults and four caregivers at an assisted-living facility in Southeast Nigeria. Focus group discussions were conducted separately for older adults and the caregivers. Data were analysed using an Inductive Approach. Results: Four themes emerged: incidence of falls and fear of falling; factors associated with falls and fear of falling; health implications of falls and fear of falling; and coping strategies to deal with falls and fear of falling. Older adults were experiencing a high prevalence of falls and FOF perceived to be caused by both cultural/environmental/institutional-related factors (poorly lit environment at night; poor ambulatory surfaces; unwillingness to accept age-related changes in physical capacity; poor disposition towards walking aids; poor treatment of in- juries; misconceptions; poor physical activity participation; and external perturbation) and intrinsic factors (psychological/emotional, concentration/attention, socio-demographic and morbidity-related). Conclusion: The older adults were experiencing a high prevalence of falls and FOF which has a multifactorial origin of common and cultural/societal/institutional/environmental-related factors. The need for a multicomponent and culturally and environmentally-specific interventions to address falls and FOF in this sample is thus highlighted" (p.1).
Author	Credentials: Ph.D. Position and Institution: Department of Medical Rehabilitation, College of Health Sciences Publication History in Peer-Reviewed Journals: 11-Limited
Publication	Type of publication: peer reviewed Publisher: Elsevier Other:

Date and Citation History	Date of publication: 2021 Cited By: 1
Stated Purpose or Research Question	"With a view to developing an interventional protocol, the present study was therefore designed to qualitatively explore falls and FOF among older adults living in an assisted-living facility in Anambra State, Nigeria" (p.2).
Author's Conclusion	"Falls and FOF had both physical and psychological consequences which were usually poorly managed among the older adults….The present study revealed multifactorial and cultural/environmental-precipitated aetiology of falls and FOF, and thus highlighted the need for culturally/environmentally-specific multicomponent intervention strategies against falls and FOF" (p. 7).
Overall Relevance to your EBP Question	Overall Relevance of Article: Moderate Rationale: Although the psychological perspective is not mentioned in our question, I believe Fear of Falling as well as physical/environmental factors must be considered when looking at in our case which wants to improving fall prevention and home safety.
Overall Quality of Article	Overall Quality of Article: Moderate Rationale: The main author just recently received his PhD which must be considered, the article was also published recently, and it was only cited by one other article. This is a newer study with a researcher who is just starting out.

	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: single group, prospective, observational cohort study
APA Reference	Johnston, K., Barras, S., & Grimmer-Somers, K. (2010). Relationship between pre-discharge occupational therapy home assessment and prevalence of post-discharge falls. *Journal of Evaluation in Clinical Practice*, *16*(6), 1333–1339. https://doi.org/10.1111/j.1365-2753.2009.01339.x
Abstract	"Rationale, aims and objective: Pre-discharge occupational therapy home assessments are common practice, and considered important for falls prevention in older people. This prospective, observational cohort study describes the association between pre-discharge home assessment and falls in the first month post-discharge from a rehabilitation hospital. Methods: 342 inpatients were recruited and followed up 1 month post-discharge. Patients were classified into diagnostic groups (cardiac, orthopaedic trauma, spinal, peripheral joint surgery, neurological and deconditioned). Age, gender, falls risk [Falls Risk Assessment Scoring System (FRASS)], functional independence scores (FIM™) and receipt (or not) of a home assessment were recorded. Patients completed a diary to document post-discharge falls. Logistic regression analysis tested the effect on falling of receiving a home assessment, age, gender, diagnostic group, FRASS and FIM™. Results: Considering all subjects, not receiving a home assessment increased the risk of falling 1 month post-discharge [odds ratio (OR) 2.6, 95% confidence interval (CI) 1.4–4.7, $P = 0.003$]. Neurological and orthopaedic trauma patients had significantly elevated risks of falling [OR (95% CI), respectively, 12.5 (4.7–33.2), 3.4 (1.4–8.4)] relative to the orthopaedic joint group. For all diagnostic groups except neurological, falls risk was mitigated by a home assessment. In non-neurological patients, adjusting for the effect of diagnostic group, FRASS and FIM™ scores indicated a significant association between not receiving a home assessment and falling (OR 4.2, 95% CI 2.1–8.2, $P < 0.001$). Conclusions: Pre-discharge occupational therapy home assessments are sound post-discharge falls-prevention strategies in non-neurological patients. The decision to conduct a home assessment should consider diagnosis, falls risk and functional independence" (p. 1333).
Author	Credentials: PhD Position and Institution: Research officer at the Centre for Allied Health Evidence at the University of South Australia Publication History in Peer-Reviewed Journals: 25+ = extensive
Publication	Type of publication: peer-reviewed Publisher: Journal of Evaluation in Clinical Practice Other: NA

Date and Citation History	Date of publication: 2010 Cited By: 39
Stated Purpose or Research Question	"Pre-discharge occupational therapy home assessments are common practice, and considered important for falls prevention in older people. This prospective, observational cohort study describes the association between pre-discharge home assessment and falls in the first month post-discharge from a rehabilitation hospital" (p. 1333).
Author's Conclusion	"Pre-discharge occupational therapy home assessments are sound post-discharge falls-prevention strategies in non-neurological patients. The decision to conduct a home assessment should consider diagnosis, falls risk and functional independence" (p. 1333).
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: This article specifically discusses intervention for fall prevention in older adult populations. It also discusses home assessments/home safety

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	Overview of Article
Type of article	Overall Type: Primary Research Study- qualitative Specific Type: Primary research study- The study took an exploratory approach using Interpretative Phenomenological Analysis
APA Reference	Naseri, C., McPhail, S. M., Haines, T. P., Morris, M. E., Shorr, R., Etherton-Beer, C., Netto, J., Flicker, L., Bulsara, M., Lee, D. C. A., Francis-Coad, J., Waldron, N., Boudville, A., & Hill, A. M. (2020). Perspectives of older adults regarding barriers and enablers to engaging in fall prevention activities after hospital discharge. *Health & Social Care in the Community, 28*(5), 1710–1722. https://doi.org/10.1111/hsc.12996

Abstract	"Older adults recently discharged from hospital are at high risk of functional decline and falls. A tailored fall prevention education provided at hospital discharge aimed to improve the capacity of older adults to engage in falls prevention activities. What remains unknown are the factors affecting behaviour change after hospital discharge. This study identified the perceived barriers and enablers of older adults to engagement in fall prevention activities during the 6-month period post-discharge. An exploratory approach using interpretative phenomenological analysis focused on the lived experience of a purposive sample (n = 30) of participants. All were recruited as a part of an RCT (n = 390) that delivered a tailored fall prevention education program at three hospital rehabilitation wards in Perth, Australia. Data were collected at 6-month post-discharge using semi-structured telephone surveys. Personal stories confirmed that some older adults have difficulty recovering functional ability after hospital discharge. Reduced physical capability, such as experiences of fatigue, chronic pain and feeling unsteady when walking were barriers for participants to safely return to their normal daily activities. Participants who received the tailored fall education program reported positive effects on knowledge and motivation to engage in fall prevention. Participants who had opportunities to access therapy or social support described more positive experiences of recovery compared to individuals who persevered without assistance. A lack of physical and social support was associated with apprehension and fear toward adverse events such as falls, injuries, and hospital readmission. The lived experience of participants following hospital discharge strongly suggested that they required more support from both healthcare professionals and caregivers to ensure that their needs were met. Further research that evaluates how to assist this population to engage in programs that will mitigate the high risk of falls and hospital readmissions is required." (p. 1710-1711)
Author	Credentials: Naseri, Chiara PhD B Sc Physiotherapy School of Physiotherapy and Exercise Science, Faculty of Health Science, Curtin University Publication History in Peer-Reviewed Journals: Moderate (15 results on google scholar)
Publication	Type of publication: Peer-reviewed journal article Publisher: Health & Social Care in the Community
Date and Citation History	Date of publication: September, 2020 Cited By: 6
Stated Purpose or Research Question	"The purpose of the current study was to explore perspectives of older adults regarding the barriers and enablers to engagement in fall prevention activities within 6-month after hospital discharge. It was expected that this would inform future intervention designs and clinical practice in this area" (p. 1712).
Author's Conclusion	"This evaluation revealed that provision of education alone for older adults around the time of hospital discharge is unlikely to adequately prepare them

	to overcome physical and social barriers to engage- ment in falls prevention once they return home. While tailored education may have assisted older adults to gain knowledge (capa- bility) and motivation to manage their fall risks, there were gaps in opportunities to engage in fall prevention activities." (p. 1719)
Overall Relevance to your EBP Question	Overall Relevance of Article: Good) Rationale: I think this article is a very relevant article as the research is on the opinions of the older adults that are engaging in fall prevention activities which is a very large part of the question that is being answered with this research. Fall prevention in older adults is important for discharge from an acute care setting.
Overall Quality of Article	Overall Quality of Article: Good Rationale: This is a good article because it is a primary research article that goes very in depth with the research on older adults and their perspectives on fall prevention which is what a big part of the research project is.

	Overview of Article
Type of article	Overall Type: Primary Research Study-quantitative Specific Type: Experimental with a Pre-test and Post-test
APA Reference	Tisher, K., Mann, K., VanDyke, S., Johansson, C., & Vallabhajosula, S. (2018). Functional measures show improvements after a home exercise program following supervised balance training in older adults with elevated fall risk. *Physiotherapy Theory and Practice*, *35*(4), 305–317. https://doi.org/10.1080/09593985.2018.1444116
Abstract	"Supervised balance training shows immediate benefit for older adults at fall risk. The long-term effectiveness of such training can be enhanced by implementing a safe and simple home exercise program (HEP). We investigated the effects of a12-week unsupervised HEP following supervised clinic-based balance training on functional mobility, balance, fall risk, and gait. Six older adults with an elevated fall risk obtained an HEP and comprised the HEP group (HEPG) and five older adults who were not given an HEP comprised the no HEP group (NoHEPG). The HEP consisted of three static balance exercises: feet-together, single-leg stance, and tandem. Each exercise was to be performed twice for 30-60 s, once per day, 3 days per week for 12 weeks. Participants were educated on proper form, safety, and progression of exercises. Pre- and post-HEP testing included Berg Balance Scale (BBS), Timed Up and Go, Short Physical Performance Battery (SPPB) assessments, Activities-Balance Confidence, Late-Life Functional Disability Instrument and instrumented assessments of balance and gait (Limits of Stability, modified Clinical Test of Sensory Interaction on Balance, Gait). A healthy control group (HCG; n = 11) was also tested. For most of the measures, the HEPG improved to the level of HCG. Though task-specific improvements like BBS and SPPB components were seen, the results did not carry over to more dynamic assessments. Results provide proof of concept that a simple HEP can be independently implemented and effective for sustaining and/or improving balance in older adults at elevated fall-risk after they have undergone a clinic-based balance intervention." (p. 307)
Author	Credentials: Kristin Tisher, DPT, Department of Physical Therapy Education, School of Health Sciences, Elon University Publication History in Peer-Reviewed Journals: Limited (2 results in google scholar)
Publication	Type of publication: Scholarly peer reviewed Publisher: Physiotherapy theory and practice
Date and Citation History	Date of publication: 2019 Cited By: 6
Stated Purpose or Research Question	"To address these limitations, the purpose of the current pilot study was to investigate the feasibility and effects of supervised clinic-based balance training followed by a 12- week, unsupervised HEP that included three key balance challenging exercises on functional mobility, fall risk, and patient-reported measures of confidence and disability. We hypothesized that the

	group engaging in an HEP would demonstrate continued superior performance on functional mobility and patient-reported outcome measures compared to the control group." (p. 306)
Author's Conclusion	"Overall, the current study provides a proof of concept that a simple HEP as prescribed in the current study can be independently implemented and effective for sustaining and/or improving balance in older adults at elevated fall-risk after they have undergone a clinic-based balance intervention." (p. 315)
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: This article has good relevance to the research question on fall prevention in older adults as this article's research is looking at fall risk in older adults. It is looking at an exercise intervention which is something that could be used with our research question on fall prevention and older adults.
Overall Quality of Article	Overall Quality of Article: Good Rationale: This article goes very in depth with the research on the older adults in the study and has great information on what is done in the research along with why it is done and background information.

	Overview of Article
Type of article	Overall Type: Primary Research Study-qualitative Specific Type: Interviews
APA Reference	Radecki, B., Reynolds, S., & Kara, A. (2018). Inpatient fall prevention from the patient's perspective: A qualitative study. *Applied Nursing Research*, *43*, 114–119. https://doi.org/10.1016/j.apnr.2018.08.001
Abstract	"Background: Falls are one of the most common adverse events in hospitals and can lead to preventable patient harm, increased length of stay, and increased healthcare costs. There is a need to understand fall risk and prevention from the patients' perspectives; however, research in this area is limited. Methods: To understand the patient perspective, semi-structured interviews were conducted with twelve patients at an academic healthcare center. Results: Qualitative analysis revealed three major themes: (1) how I see myself, (2) how I see the interventions; and (3) how I see us. The theme "How I see myself" describes patients' beliefs of their own fall risk and includes the sub-themes of awareness, acceptance/rejection, implications, emotions, and personal plan. Interventions, such as fall alarms, are illustrated in the theme "How I see the interventions" and includes the subthemes what I see and hear and usefulness of equipment. Finally, "How I see us" describes barriers to participating in the fall prevention plan. Conclusions: Most fall prevention programs favor clinician-led plan development and implementation. Patient fall assessments needs to shift from being clinician-centric to patient-centric. Nurses must develop relationships with patients to facilitate understanding of their needs. Developing these truly patient-centered programs may reduce the over-reliance on bed alarms and allow for implementation of strategies aimed to mitigate modifiable risk factors leading to falls" (p.114).
Author	Credentials: Bethany Radecki MSN, RN, ACNS-BC, Indiana University Health Methodist Hospital Publication History in Peer-Reviewed Journals: limited (3 results on google scholar)
Publication	Type of publication: Peer reviewed journal article Publisher: Applied Nursing Research Journal
Date and Citation History	Date of publication: October, 2018 Cited By: 26
Stated Purpose or Research Question	"The aim of this study was to describe the patient's perspective of fall prevention in an acute care setting to aid in the design of patient-centered strategies." (p. 115)
Author's Conclusion	"Most fall prevention programs utilize clinician-led plant development and implementation without true patient involvement. Current fall prevention programs are well intentioned but may fail in practice because of the mismatch between our view and those of the patients. The fall assessment needs a shift from being clinician-centric to patient-centric." (p. 118)

Overall Relevance to your EBP Question	Overall Relevance of Article: moderate Rationale: This study looked at the perspectives of the patients in an inpatient hospital setting. Our question is about subacute care, so that part does not line up with our EBP question, however, getting opinions of patients on fall prevention is important when researching for our research question.
Overall Quality of Article	Overall Quality of Article: Good Rationale: I think that this is a good quality article as it is a great research study that gathered a lot of really important information supporting its claim.

	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: Randomized controlled trial
APA Reference	Timmers, T., Janssen, L., van der Weegen, W., Das, D., Marijnissen, W. J., Hannink, G., van der Zwaard, B. C., Plat, A., Thomassen, B., Swen, J. W., Kool, R. B., & Lambers Heerspink, F. O. (2019). The effect of an app for day-to-day postoperative care education on patients with total knee replacement: Randomized controlled trial. *JMIR mHealth and uHealth*, *7*(10), 1-17. https://doi.org/10.2196/15323
Abstract	"Background: Patients who undergo primary Total Knee Replacement surgery (TKR) are often discharged within 1-3 days after surgery. With this relatively short length of hospital stay, a patient's self-management is a crucial factor in optimizing the outcome of their treatment. In the case of TKR, self-management primarily involves adequate pain management, followed by physiotherapy exercises and daily self-care activities. Patients are educated on all these topics by hospital staff upon discharge from the hospital but often struggle to comprehend this information due to its quantity, complexity, and the passive mode of communication used to convey it. Objective: This study primarily aims to determine whether actively educating TKR patients with timely, day-to-day postoperative care information through an app could lead to a decrease in their level of pain compared to those who only receive standard information about their recovery through the app. In addition, physical functioning, quality of life, ability to perform physiotherapy exercises and daily self-care activities, satisfaction with information, perceived involvement by the hospital, and health care consumption were also assessed. Methods: A multicenter randomized controlled trial was performed in five Dutch hospitals. In total, 213 patients who had undergone elective, primary, unilateral TKR participated. All patients had access to an app for their smartphone and tablet to guide them after discharge. The intervention group could unlock day-to-day information by entering a personal code. The control group only received weekly, basic information. Primary (level of pain) and secondary outcomes (physical functioning, quality of life, ability to perform physiotherapy exercises and activities of daily self-care, satisfaction with information, perceived involvement by the hospital, and health care consumption) were measured using self-reported online questionnaires. All outcomes were measured weekly in the four weeks after discharge, except for physical functioning and quality of life, which were measured at baseline and at four weeks after discharge. Data was analyzed using Student *t* tests, chi-square tests, and linear mixed models for repeated measures. Results: In total, 114 patients were enrolled in the intervention group (IG) and 99 in the control group (CG). Four weeks after discharge, patients in the IG performed significantly better than patients in the CG on all dimensions of pain: pain at rest (mean 3.45 vs mean 4.59; *P*=.001), pain during activity

	(mean 3.99 vs mean 5.08; *P*<.001) and pain at night (mean 4.18 vs mean 5.21; *P*=.003). Additionally, significant differences were demonstrated in favor of the intervention group for all secondary outcomes. Conclusions: In the four weeks following TKR, the active and day-to-day education of patients via the app significantly decreased their level of pain and improved their physical functioning, quality of life, ability to perform physiotherapy exercises and activities of daily self-care, satisfaction with information, perceived involvement by the hospital, and health care consumption compared to standard patient education. Given the rising number of TKR patients and the increased emphasis on self-management, we suggest using an app with timely postoperative care education as a standard part of care" (pp. 1-2).
Author	Credentials: MSc Business Process and IT Management, PhD IQ Healthcare Position and Institution: Owner/Developer, Interactive Studios Publication History in Peer-Reviewed Journals: Authored 90 publications on Google Scholar, Extensive publication history
Publication	Type of publication: Scholarly peer-reviewed journal Publisher: JMIR Publications
Date and Citation History	Date of publication: October 21, 2019 Google Scholar Cited By: 1
Stated Purpose or Research Question	"The aim of this randomized controlled trial was to investigate the effect of an interactive app on patients' level of pain, physical functioning, quality of life, satisfaction, and health care consumption in the first four weeks of recovery after TKR. We hypothesized that, compared to standard practices of patient education, providing patients with timely, day-to-day information via an app would have a positive effect on all outcomes" (p. 2).
Author's Conclusion	"The results of our study demonstrate the effectiveness of using an app to actively educate patients on a day-to-day basis in the first four weeks of their recovery after TKR" (p. 13).
Overall Relevance to your EBP Question	Overall Relevance of Article: Moderate Rationale: This article addresses patient education regarding health outcomes, a role which is well within the scope of occupational therapy practice. The sample in this study does not fully address the population in our EBP research question. It assesses total knee replacement patients but not older adults. The article addresses outcomes of quality of life, self-care tasks, and satisfaction after joint replacement surgery. These outcomes may include fall prevention but do not include it explicitly.
Overall Quality of Article	Overall Quality of Article: Good Rationale: This article was obtained from a reputable, peer-reviewed journal. It's publication date is recent. The study design, a randomized controlled trial, is the gold standard for accurate and valid research. The sample size of 114 participants is large enough to assume generalizability of

	the results. Researchers directly acknowledged limitations to the study as the rate of participants who downloaded the app.

	Overview of Article
Type of article	Overall Type: Primary Research Study (qualitative, quantitative, etc.) Specific Type: "This was a quasi-experimental study with a 1-group pretest–posttest design investigating the effects of a 10-week judo-inspired exercise program for physical functions, fall-related self-efficacy, activity level, and falling techniques among working age adults" (p.2).
APA Reference	Arkkukangas, M., Strömqvist Bååthe, K., Ekholm, A., & Tonkonogi, M. (2020). Health promotion and prevention: The impact of specifically adapted judo-inspired training program on risk factors for falls among adults. *Preventive Medicine Reports*, *19,* 1-3. https://doi.org/10.1016/j.pmedr.2020.101126
Abstract	"Globally, falls and fall-related injuries constitute a severe threat to public health at all ages. New approaches are warranted since existing knowledge and actions have failed to reduce the incidence of falls and fall-related injuries, both at work and during leisure time. The purpose of this quasi-experimental study was to investigate the impact of a 10-week supervised judo-inspired exercise program, Judo4Balance, provided in a workplace setting among men and women targeting: physical functions, activity level, fall-related self-efficacy, and techniques for safe landing when falling. A total of 79 adults from seven different workplaces in Sweden, mean age 45 years (18–68), participated in the program. The study was conducted from May 2018 to June 2019. The 10-week exercise program performed in a workplace setting improved physical and psychological functions, as well as techniques for falling safely, factors of great importance to prevent falls and fall-related injuries among men and women. Therefore, it is suggested that the judo-inspired exercise program may be an effective tool in the quest to promote health and prevention of risk factors for falls and fall-related injuries among those of working age" (p.1).
Author	Credentials: Marina Arkkukangas, Doctor of Philosophy Position and Institution: Corresponding author at: Research and Development in Sörmland, Sweden. Publication History in Peer-Reviewed Journals: Extensive, 22
Publication	Type of publication: scholarly peer-reviewed journal Publisher: Elsevier Inc.
Date and Citation History	Date of publication: Accepted 13 May 2020, Available online 19 May 2020 Cited By: 3
Stated Purpose or Research Question	"The purpose of this quasi-experimental study was to investigate the impact of a 10-week supervised judo-inspired exercise program, Judo4Balance, provided in a workplace setting among men and women targeting: physical functions, activity level, fall-related self-efficacy, and techniques for safe landing when falling" (p. 1).
Author's Conclusion	"The 10-week judo-inspired exercise program, Judo4Balance, performed in a workplace setting could be an effective intervention targeting strength,

	balance, fall-related self-efficacy, and falling techniques. This study shows improvements in both physical and psychological functions, which are important for both reducing the risk of falls and fall-related injuries among men and women" (p.5).
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: This research study is relevant to our EBP question because the findings show the benefits of a purposeful intervention of a judo exercise program for older adults in reducing the risks for falls. This directly correlates to our population of older adults and provides a specific, evidence-based intervention.
Overall Quality of Article	Overall Quality of Article: Good Rationale: Written in the last 5 years. Established author, this article has been cited by others. Limitations of the study were minimal, no conflicts of interest behind the funding of the study.

	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: Quantitative, cross-sectional, pre-intervention survey
APA Reference	Magklara, E., & Morrison, V. (2016). The associations of illness perceptions and self-efficacy with psychological well-being of patients in preparation for joint replacement surgery. *Psychology, Health & Medicine*, *21*(6), 735–742. https://doi.org/10.1080/13548506.2015.1115109
Abstract	"Patient well-being on referral to surgery likely affects their surgical experience yet few studies examine pre-surgical correlates of well- being. Guided by the Common Sense Model of Self-Regulation and Social Cognitive theory, this study examined whether illness and emotional representations, general and domain self-efficacy were associated with pre-surgical well-being. The pre-surgical assessment of a three-wave prospective study is reported. Fifty-four hip and knee replacements patients (mean age = 69.33; SD = 8.57) were recruited in the pre-surgery educational clinic at a UK general hospital. Patients completed a questionnaire-pack including the Revised Illness Perceptions Questionnaire, the General Self-Efficacy Scale, the Self-Efficacy for Rehabilitation Outcome Scale, the Falls- Efficacy Scale, and the Short Form of Psychological Well-Being Index. Multiple hierarchical regression analyses showed that above and beyond demographic and clinical characteristics, negative emotional representations were associated with lower psychological well-being while strong general self-efficacy beliefs were positively related to psychological well-being. Independent of demographic and clinical characteristics, joint replacement patients' psychological well-being was associated with their cognitions and emotional reactions to their condition before surgery. Early interventions could potentially target these modifiable factors to improve pre-surgical well-being in this group of patients, with potential for additional post-surgical benefit" (p. 735).
Author	Credentials: Ph.D. Psychology, MS Psychology Position and Institution: School of Psychology, Bangor University Publication History in Peer-Reviewed Journals: Limited, 6
Publication	Type of publication: Scholarly, peer-reviewed journal Publisher: Routledge
Date and Citation History	Date of publication: October 27, 2015 Google Scholar Cited By: 13
Stated Purpose or Research Question	"...the objective of this study is to examine whether patients' illness and emotional representations as described by the CSM and general and domain-specific self-efficacy (Bandura, 1977; Schwarzer, 2014), are related to psychological well-being before joint replacement surgery for osteoarthritis" (p. 736).
Author's Conclusion	"....our data demonstrate that for many individuals facing THR or TKR surgery, psychological well-being relates to their concurrent cognitions, such as general self-efficacy and also to the emotional reactions to their health condition" (p. 740).

Overall Relevance to your EBP Question	Overall Relevance of Article: Moderate Rationale: This article analyzes self-efficacy for patients undergoing joint replacement surgery. Few articles addressing this population focus on psychological well-being, so this perspective is valuable to the remaining breadth of sources selected. However, this study focuses on patient experiences prior to surgery while our EBP research question seeks to understand post-surgical risks.
Overall Quality of Article	Overall Quality of Article: Moderate Rationale: While this study was published in a reputable peer-reviewed journal, it is over five years outdated. It utilizes a cross-sectional design with a relatively small sample size, two characteristics which researchers acknowledge as limitations to generalizability. Results were indicated as statistically significant with *p*-values as less than 0.05.

	Overview of Article
Type of article	Overall Type: Primary Research Study and qualitative Specific Type: Qualitative interviews were conducted with eight people
APA Reference	Petersson, I., Lilja, M., & Borell, L. (2012). To feel safe in everyday life at home – a study of older adults after home modifications. *Ageing and Society*, *32*(5), 791–811. https://doi.org/10.1017/S0144686X11000614
Abstract	"The aim of this study was to explore aspects contributing to experiences of safety in everyday life for older adults who have received modification services. Qualitative interviews were conducted with eight people. Data were analysed using a comparative approach. Three main categories emanated in the analysis: prerequisites that enable a feeling of safety, strategies that enable safety in everyday life, and use of and reliance on technology impacts on safety. The findings revealed that to feel safe in everyday life was based on three prerequisites: feeling healthy, having someone to rely on and feeling at home. The fulfilment of these prerequisites further impacted on the participants' strategies for handling problems in everyday life but also on the ability to use and benefit from technology such as home modifications. In conclusion, the findings indicated that interventions provided to increase safety for older adults should primarily be focused on the presence and fulfilment of prerequisites and later on other interventions such as technology. Technology such as home modifications and assistive devices was not found in this study to facilitate the feeling of safety unless supported by the fulfilled prerequisites. Implications of these findings for clinical practice are discussed" (p. 791).
Author	Credentials: Ph.D. Position and Institution: Karolinska Institutet, Division of Occupational Therapy Department of Neurobiology, Care Sciences and Society (NVS) Stockholm, Sweden. (Could not find specific position) Publication History in Peer-Reviewed Journals: Moderate amount around 12.
Publication	Type of publication: peer-reviewed journal Publisher: Cambridge University Press

	Other: N/A
Date and Citation History	Date of publication: 2012 Cited By: 40
Stated Purpose or Research Question	"In the research project as well as in this present study the concept of safety is viewed as the individuals' own self-perceived experiences of safety in everyday life. The experiences of safety are therefore discussed in relation to how they perceived their safety in different everyday life activities such as transferring outside the home or showering, and aspects contributing to their experiences of safety in these situations" (p. 793).
Author's Conclusion	"The findings identified that contributions to older people' safety in everyday life are related to at least three important aspects; prerequisites that make safety possible, strategies towards handling problems in everyday life and reliance on technology….The study showed that different services such as home help services, home modifications and assistive devices need to be related to the older adults' situations, strategies for handling problems, as well as the individuals' values and needs, since the services alone will not be able to facilitate experiencing a safe everyday life" (p. 809).
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: The relevance of this article is good because our EBP question considers safety and fall prevention which this article also looks at. This article included qualitative interviews which allows other researchers to consider the personal experiences of patients, the research question discusses the experience of safety in different situations among older adults which is good for us to consider, and the conclusions found that services need to meet the needs of the older adults, which is relative because our case considered joint replacement, so services or intervention must consider that.
Overall Quality of Article	Overall Quality of Article: Moderate Rationale: The quality of article is moderate The author is from a good university, and the article was published by Cambridge University, and it is published within the last 10 years.

	Overview of Article
Type of article	Overall Type: Primary Research Study (qualitative, quantitative, etc.) Specific Type: "Thirty-five occupational therapists took part in this within-subjects repeated measures study, delivered within a living lab setting. Participants carried out the home environment falls-risk assessment process under two counterbalanced treatment conditions; using 3D guidetomeasure-OT; and using a 2D paper-based guide" (p.350).
APA Reference	Hamm, J., Money, A., & Atwal, A. (2019). Guidetomeasure-OT: A Mobile 3D application to improve the accuracy, consistency, and efficiency of clinician-led home-based falls-risk assessments. *International Journal of Medical Informatics*, *129*, 349–365. https://doi.org/10.1016/j.ijmedinf.2019.07.004
Abstract	Background: "A key falls prevention intervention delivered within occupational therapy is the home environment falls-risk assessment process. This involves the clinician visiting the patient's home and using a 2D paper-based measurement guidance booklet to ensure that all measurements are taken and recorded accurately. However, 30% of all assistive devices installed within the home are abandoned by patients, in part as a result of the inaccurate measurements being recorded as part of the home environment falls-risk assessment process. In the absence of more appropriate and effective guidance, high levels of device abandonment are likely to persist. Aim: This study presents guidetomeasure-OT, a mobile 3D measurement guidance application designed to support occupational therapists in carrying out home environment falls-risk assessments. Furthermore, this study aims to empirically evaluate the performance of guidetomeasure-OT compared with an equivalent paper-based measurement guidance booklet. Methods: Thirty-five occupational therapists took part in this within-subjects repeated measures study, delivered within a living lab setting. Participants carried out the home environment falls-risk assessment process under two counterbalanced treatment conditions; using 3D guidetomeasure-OT; and using a 2D paper-based guide. Systems Usability Scale questionnaires and semi-structured interviews were completed at the end of both task. A comparative statistical analysis explored performance relating to measurement accuracy, measurement accuracy consistency, task completion time, and overall system usability, learnability, and effectiveness of guidance. Interview transcripts were analyzed using inductive and deductive thematic analysis, the latter was informed by the Unified Theory of Acceptance and Use of Technology model. Results: The guidetomeasure-OT application significantly outperformed the 2D paper-based guidance in terms task efficiency ($p < 0.001$), learnability ($p < 0.001$), system usability ($p < 0.001$), effectiveness of guidance ($p = 0.001$). Regarding accuracy, in absolute terms, guidetomeasure-OT produced lower mean error differences for 11 out of 12 items and performed significantly better for six out of 12 items ($p = < 0.05$). In terms of SUS, guidetomeasure-OT scored 83.7 compared with 70.4 achieved by the booklet.

	Five high-level themes emerged from interviews: Performance Expectancy, Effort Expectancy, Social Influence, Clinical Benefits, and Augmentation of Clinical Practice. Participants reported that guidetomeasure-OT delivered clearer measurement guidance that was more realistic, intuitive, precise and usable than the paper-based equivalent. Audio instructions and animated prompts were seen as being helpful in reducing the learning overhead required to comprehend measurement guidance and maintain awareness of task progression. Conclusions: This study reveals that guidetomeasure-OT enables occupational therapists to carry out significantly more accurate and efficient home environment falls-risk assessments, whilst also providing a measurement guide tool that is considered more usable compared with the paper-based measurement guide that is currently used by clinicians in practice. These results are significant as they indicate that mobile 3D visualisation technologies can be effectively deployed to improve clinical practice, particularly within the home environment falls-risk assessment context. Furthermore, the empirical findings constitute overcoming the challenges associated with the digitisation of health care and delivery of new innovative and enabling technological solutions that health providers and policy makers so urgently need to ease the ever-increasing burden on existing public resources. Future work will focus on the development and empirical evaluation of a mobile 3D application for patient self-assessment and automated assistive equipment prescription. Furthermore, broader User Experience aspects of the application design and the interaction mechanisms that are made available to the user could be considered so as to minimize the effect of cognitive overloading and optimise user performance" (p. 350).
Author	Credentials: Julian Hamm, PhD Position and Institution: Brunel University, Department of Computer Science, London Publication History in Peer-Reviewed Journals: Moderate, 10
Publication	Type of publication: Scholarly peer-reviewed journal Publisher: Elsevier B.V.
Date and Citation History	Date of publication: 6 July 2019 Cited By: 2
Stated Purpose or Research Question	"The aim of this study is to evaluate the performance of the guidetomeasure-OT application (developed specifically for Occupational Therapists), compared with existing 2D paper-based measurement guidance tools that are currently used in practice. This study explores, from the clinicians' perspective, the relative effectiveness and efficiency of the application, and perceptions of the application in terms of user satisfaction and attitudes towards adopting and using this new technology in practice" (p. 351).
Author's Conclusion	"An empirical evaluation of the performance of the application compared with paper-based measurement guidance revealed that in terms of measurement accuracy, accuracy consistency, and task efficiency, and

	usability the guidetomeasure-OT delivers significant performance gains over the paper-based equivalent" (p. 363).
Overall Relevance to your EBP Question	Overall Relevance of Article: Moderate Rationale: This article is relevant to some portions of the EBP question but not all. This article focused more on fall prevention evaluation than on purposeful interventions that OTs could use for older adults.
Overall Quality of Article	Overall Quality of Article: Good Rationale: author is well established and cited by others, sample size was calculated with a priori power analysis. P values for task efficiency, usability, learnability, and effectiveness of guidance were all less than .05 using the guidetomeasure-OT application.

	Overview of Article
Type of article	Overall Type: Primary Research Study (qualitative, quantitative, etc.) Specific Type: "In this study, we build on the existing literature by investigating the perspectives of family caregivers of older patients who were recently discharged from the hospital and considered at risk for falling while hospitalized" (p.1).
APA Reference	Hoffman, G. J., Shuman, C. J., Montie, M., Anderson, C. A., & Titler, M. G. (2019). Caregivers' views of older adult fall risk and prevention during hospital-to-home transitions. *Applied Nursing Research*, *47*, 10–15. https://doi.org/10.1016/j.apnr.2019.03.006
Abstract	No abstract was provided. Highlights: Caregivers co-manage fall prevention with recently discharged care recipients. Prevention efforts include heavy engagement with home environmental modifications. Caregivers aim to reconcile care recipient autonomy with post-discharge safety. Fall prevention education hospital discharge for at-risk care recipients is limited. A strategy of caution, as opposed to functional recovery efforts, was employed
Author	Credentials: Geoffrey J. Hoffman (PhD, MPH) Position and Institution: Assistant Professor, University of Michigan School of Nursing Publication History in Peer-Reviewed Journals: Extensive, 49
Publication	Type of publication: scholarly peer-reviewed journal Publisher: Elsevier Inc.
Date and Citation History	Date of publication: 24 March 2019 Cited By: 5
Stated Purpose or Research Question	"We aimed to describe (1) caregivers' perceptions of their recently hospitalized care recipients' risk for falls, factors contributing to care recipient fall risk, and actions that can be taken to prevent care recipient falls at home; (2) caregivers' perceptions of information received at the care recipients' discharge to prevent falls at home; and (3) whether caregivers were aware of and perceived as useful three fall prevention brochures produced by the CDC" (p.1).
Author's Conclusion	"Six major themes were identified: (1) limited formal fall prevention resources at transitions; (2) low perceived transitional fall risk; (3) prioritizing care recipient autonomy in addressing transitional fall risk; (4) caregiver engagement at transitions, emphasizing risk avoidance; (5) perceiving falls as a family matter; and (6) caregiver perceptions about transitional fall prevention education" (p. 11).

Overall Relevance to your EBP Question	Overall Relevance of Article: Moderate Rationale: This article is relevant to some portions of the EBP question but not all. This article focused on the lack of fall prevention education upon discharge from the hospital and the importance of educating caregivers and patients to reduce risk of falls.
Overall Quality of Article	Overall Quality of Article: Good Rationale: article was published within the last 5 years; author is reputable and cited by others. Approval by the Institutional Review Board (IRB) allowed recruitment of caregivers to be the participants in this study. Two independent researchers transcribed the participant interviews.

	Overview of Article
Type of article	Overall Type: Primary Research Study (qualitative, quantitative, etc.) Specific Type: "A qualitative descriptive research design was used to explore patients' perceptions about falls and fall related events after they transitioned from hospital to home" (p.24).
APA Reference	Shuman, C. J., Montie, M., Hoffman, G. J., Powers, K. E., Doettl, S., Anderson, C. A., & Titler, M. G. (2019). Older adults' perceptions of their fall risk and prevention strategies after transitioning from hospital to home. *Journal of Gerontological Nursing*, *45*(1), 23-30. https://doi.org/10.3928/00989134-20190102-04
Abstract	"Falls are common adverse events following hospital discharge. However, prevention programs are not tailored for older patients transitioning home. To inform development of transitional fall prevention programs, nine older adults designated as being at risk of falls during hospitalization who were recently discharged home were asked about their perceptions of fall risk and prevention, as well as their knowledge and opinion of materials from the Centers for Disease Control and Prevention Stopping Elderly Accidents, Deaths & Injuries Initiative. Using the constant comparative method, five themes were identified: Sedentary Behaviors and Limited Functioning; Prioritization of Social Involvement; Low Perceived Fall Risk and Attribution of Risk to External Factors; Avoidance and Caution as Fall Prevention; and Limited Falls Prevention Information During Transition from Hospital to Home. Limited awareness of and engagement in effective fall prevention may heighten recently discharged older adults' risks for falls. Prevention programs tailored to the post-discharge period may engage patients in fall prevention, promote well-being and independence, and link hospital and community efforts" (p.23).
Author	Credentials: Clayton J. Shuman, PhD, RN Position and Institution: Assistant Professor, University of Michigan School of Nursing Publication History in Peer-Reviewed Journals: Extensive, 29
Publication	Type of publication: scholarly peer-reviewed journal Publisher: SLACK Incorporated
Date and Citation History	Date of publication: January 02, 2019 Cited By: 14
Stated Purpose or Research Question	"The aims of the current study were to describe recently hospitalized older adults' perceptions about: (a) their overall risk for falls, factors contributing to fall risk, and actions they can take to prevent falls at home; (b) information they received at discharge to prevent falls at home; and (c) their awareness and perceptions regarding the usefulness of three CDC STEADI older adult fall prevention brochures (Check for Safety, Stay Independent, and What You Can Do to Prevent Falls)" (p. 24).

Author's Conclusion	"Based on the results of the current study, researchers assert that future development and testing of fall prevention interventions should address fall prevention delivery gaps and consider older adults' perceptions regarding their fall risk and falls, including their sedentary behaviors, desire for social interaction, low risk perception, misguided prevention efforts, and lack of engagement and activation in prevention efforts" (p. 29).
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: This article was relevant to almost all aspects of the EBP question. This article gave insight of the perceptions that older adults have of being at risk for falls. It also emphasized the importance of fall prevention education upon discharge from the hospital to a sub-acute or acute setting.
Overall Quality of Article	Overall Quality of Article: Good Rationale: Despite a very small sample size of nine participants; two members of the research team transcribed the interviews and four independent researchers performed the coding of themes.

	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: Qualitative Descriptive Methodology
APA Reference	Joshi, R., Joseph, A., Mihandoust, S., Hoskins, L., O'Hara, S., Dye, C. J., & Madathil, K. C. (2021). Understanding key home and community environment challenges encountered by older adults undergoing total knee or hip arthroplasty. *Gerontologist, 61(*7), 1071–1084. https://doi.org/10.1093/geront/gnab025
Abstract	"Background and Objectives: Older adults undergoing total hip arthroplasty (THA) and total knee arthroplasty (TKA) experience significant challenges while navigating their homes after surgery and are at higher risk for falls and injuries. This study explored the specific home and community physical environment challenges faced by community-dwelling older adults while performing daily activities and actions taken to modify their homes before surgery. Research Design and Methods: Using a qualitative descriptive methodology, semistructured interviews were conducted with 22 older adult–care partner dyads pre- and postsurgery to identify key built environment barriers and facilitators in addition to home modifications made pre- and postsurgery. Results: Challenges anticipated by participants to perform daily activities presurgery varied from those experienced postsurgery. Lack of support along stairs or in bathrooms, flooring material, and transitions were significant concerns raised by the participants before surgery. Size and layout of home and ergonomics of resting furniture were recognized as issues postsurgery. Modifications ranged from easy fixes such as rearranging furniture, removing clutter, and installing grab bars to high-cost structural changes such as remodeling critical spaces such as bathrooms. Although participants agreed on the importance of conducting proactive home assessments and modifications before surgery, perceived costs and lack of knowledge or services limit older adults from implementing some changes. Discussion and Implications: Home modifications must be considered proactively before an event such as a THA or TKA. These should be done within the context of the specific needs, abilities, financial capabilities, and social and physical home environments of the individual and the residential caregivers." (p.1071)
Author	Credentials: PhD, EDAC Position and Institution: Rutali is a Post-doctoral Health Research Fellow at HKS architects. She holds a PhD as well as a MS degree in Architecture and Health from Clemson University Publication History in Peer-Reviewed Journals: 13 limited

Publication	Type of publication: Peer-reviewed journals Publisher: Oxford Academic
Date and Citation History	Date of publication: Published on February 19th, 2021. Cited By: 0
Stated Purpose or Research Question	"This study explored challenges faced by older adults while performing ADLs and IADLs and modifications made before and after surgery to cope with the difficulties. The study examined the reasons for modifications made (or not made) to the environment. This study also aimed to garner patient and care partner perspectives regarding when home assessments would be most beneficial to ensure a safe transition back home." (p. 1073)
Author's Conclusion	"To ensure safe and comfortable transitions of older adults from the hospital to their homes following the surgery, home assessments and modifications must be considered proactively before a planned event such as a TJA in the context of the specific needs, abilities, financial capabilities, and social and physical home environments of the individual." (p. 1082)
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: This article summarizes how home modifications can reduce falls in older adults after elective joint replacement surgery which is a part of our intervention that needs to be provided in sub-acute care.
Overall Quality of Article	Overall Quality of Article: Good Rationale: This article explains what went well with home modifications and what didn't go well with home modifications after joint replacement surgery. The study provided good information but has its limitations being that participants were only recruited from one hospital and since it was qualitative it did not allow for descriptive differences to be found.

	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: Parallel, blinded randomized controlled trial
APA Reference	Okubo, Y., Sturnieks, D. L., Brodie, M. A., Duran, L., & Lord, S. R. (2019). Effect of reactive balance training involving repeated slips and trips on balance recovery among older adults: A blinded randomized controlled trial. *The Journals of Gerontology*, *71*(9), 1489-1496. https://doi.org/10.1093/gerona/glz021
Abstract	"Background: This study examined whether reactive balance training (exposures to slips and trips) could improve balance recovery and reduce perturbation-induced falls among older adults. Methods: Forty-four community-dwelling older adults participated in a parallel, blinded randomized controlled trial conducted in a research institute in Sydney, Australia in 2017-2018 (ACTRN12617000564358). The intervention group (n = 22) underwent three 40 minutes sessions (total 120 minutes) that exposed them to (1) 20 trips, (2) 20 slips, and (3) 10 trips and 10 slips in mixed order, over 2 days. The control group (n = 22) received one 40 minutes session of sham training. The primary outcome was falls (>30% body weight in harness) when exposed to trips and slips at post-assessment. Results: At post-assessment, a total of 51 falls (23 and 27 falls from induced slips and trips, respectively) were recorded in the laboratory. Relative to the control group, the intervention group experienced fewer total falls (rate ratio [RR] = 0.40, 95% confidence interval [CI] = 0.22-0.76), slip falls (RR = 0.33, 95% CI = 0.12-0.90) and trip falls (RR = 0.49, 95% CI = 0.21-1.12). Eight participants reported adverse events (5 in the intervention group and 3 in the control group) which were related mainly to discomfort caused by a suboptimal harness used in the initial stages of the trial. Conclusions: The reactive balance training reduced perturbation-induced falls by 60% indicating improved balance recovery from trips and slips. A comfortable safety harness system is essential to prevent discomfort. Reactive balance training may complement traditional exercise programs in fall prevention interventions."(p.1489)
Author	Credentials: PhD Position and Institution: He is a Postdoctoral Fellow at Neuroscience Research Australia and a Conjoint Lecturer at UNSW Medicine. Publication History in Peer-Reviewed Journals: 14-limited
Publication	Type of publication: Peer-reviewed journal Publisher: Oxford Academic Other: Part of the journals of gerontology

Date and Citation History	Date of publication: February 5th, 2019 Cited By: 31
Stated Purpose or Research Question	"The primary aim of this randomized control trial was to test the hypothesis that a reactive balance training program comprising three 40 minutes sessions using slips and trips would reduce perturbation-induced falls in older adults. The secondary aims were to examine (a) how reactive balance training effects balance recovery kinematics, (b) if any improvements might be related to changes in sensorimotor performance, and (c) if our protocol could minimize anticipatory changes in the approach gait kinematics." (p. 1490)
Author's Conclusion	"The reactive balance training program reduced falls after lab-induced slips and trips by 60% and improved postural control during balance recovery" (p.1495)
Overall Relevance to your EBP Question	Overall Relevance of Article: Moderate Rationale: The article provides good results however it doesn't fully pertain to our EBP question of what current interventions are for fall prevention being that it pertains to physical therapy more than occupational therapy. The focus of this article is very heavily focused on gait training which would be provided by a physical therapist and very little would be implemented by an OT. As well as that, no specific interventions are provided to help falls, the article only focuses on what controlled, laboratory settings helped to prevent falls.
Overall Quality of Article	Overall Quality of Article: Moderate Rationale: The article was easy to follow but did have some limitations being that it was more PT based, and participants had to use an unnatural gait to complete the study. Because of the use of an unnatural gait it would be very hard to apply this to any population, but especially older adults.

Review of Research

	Overview of Article
Type of article	Overall Type: Review of Research Study Specific Type: Systematic Review (in the title)
APA Reference	Dorsey, J. & Bradshaw, M. (2017). Effectiveness of occupational therapy interventions for lower-extremity musculoskeletal disorders: A systematic review. *The American Journal of Occupational Therapy*, *71*(1), 1-11. https://doi.org/10.5014/ajot.2017.023028
Abstract	"Lower-extremity (LE) musculoskeletal disorders (MSDs) can have a major impact on the ability to carry out daily activities. The effectiveness of interventions must be examined to enable occupational therapy practitioners to deliver the most appropriate services. This systematic review examined the literature published between 1995 and July 2014 that investigated the effectiveness of occupational therapy interventions for LE MSDs. Forty-three articles met the criteria and were reviewed. Occupational therapy interventions varied on the basis of population subgroup: hip fracture, LE joint replacement, LE amputation or limb loss, and nonsurgical osteoarthritis and pain. The results indicate an overall strong role for occupational therapy in treating clients with LE MSDs. Activity pacing is an effective intervention for nonsurgical LE MSDs, and multidisciplinary rehabilitation is effective for LE joint replacement and amputation. Further research on specific occupational therapy interventions in this important area is needed" (p. 1)
Author	Credentials: OTD, OTR/L, CEAS Position and Institution: Associate Professor, Department of Occupational Therapy, Ithaca College in Ithaca, NY Publication History in Peer-Reviewed Journals: Extensive
Publication	Type of publication: Scholarly peer-reviewed journal Publisher: The American Journal of Occupational Therapy Other: Published article inside The American Journal of Occupational Therapy
Date and Citation History	Date of publication: January/February 2017 Cited By: 15
Stated Purpose or Research Question	"The focused question for this review was, What is the evidence for the effect of occupational therapy interventions for adults with MSDs of the LE (pelvis, hip, leg, ankle, and foot)?" (p. 2) MSDs = musculoskeletal disorders; LE = lower extremity

Author's Conclusion	"Strong evidence supports the role of occupational therapy practitioners on multidisciplinary teams working with people with hip or knee replacement" (p. 8).
Overall Relevance to your EBP Question	Overall Relevance of Article: Moderate Rationale: This study looked at the effectiveness of interventions on all lower-extremity musculoskeletal disorders, so it only had a brief section of the effectiveness of interventions for joint replacements. It also didn't seem to just look at the population of older adults. It also had a brief section comparing different practice settings which I think can be helpful for our topic.
Overall Quality of Article	Overall Quality of Article: Moderate Rationale: The reviewed articles were mostly from mid to late 2000s. It was also cited 15 times which I thought was pretty good. The author also seems to be credible with an extensive publication history.

	Overview of Article
Type of article	Overall Type: Review of Research Study Specific Type: A systematic review and meta-analysis (in the title)
APA Reference	Huang, S. F., Yang, T. T., Chen, S. F., Lu, L. T., & Liao, J. Y. (2018). Effects of fall prevention programs for older adults on fall-related injuries: A systematic review and meta-analysis. *Journal of Research in Education Services*, *63*(2), 163-186. https://doi.org/10.6209/JORIES.201806_63(2).0007
Abstract	"This study aimed to evaluate the effects of fall prevention programs on fall-related injuries, and the characteristics of these programs. The Cochrane Library, Medline, PubMed, PsycARTICLES, PsycINFO, ERIC, AgeLine, CINAHL, Psychology and Behavioral Sciences Collection databases were searched for randomized clinical trials on fall-related injuries among older adults from 1996 to 2016. A meta-analysis was performed to calculate the combined effects of fall prevention programs on fall-related injuries. A total of 33 research papers were included in the meta-analysis (68,736 participants). The meta-analysis found that fall prevention programs had a significant effect in preventing fall-related injuries (OR=0.86, 95% CI: 0.75-0.97), but a borderline-significant effect in preventing fractures (OR=0.80, 95% CI: 0.63-1.03). The fall prevention programs had a significant effect on fall-related injuries when both male and female participants were included in the study sample, interventions involved healthcare professionals, more than 20% of the patient population had a history of falling, interventions occurred in the community setting, and multiple interventions were used. Thus, fall prevention programs had a small but significant effect in preventing fall-related injuries but only a borderline effect in preventing fractures. When planning fall prevention programs, future policy makers and clinical workers should consider the different characteristics of older adults to propose appropriate intervention programs " (p. 163-164).
Author	Credentials: PhD Position and Institution: Department of senior citizen service, Mackay Junior College of Medicine, Nursing, and Management Publication History in Peer-Reviewed Journals: Moderate
Publication	Type of publication: Scholarly peer-reviewed journal Publisher: Journal of Research in Education Services Other: Published article inside the Journal of Research in Education Services
Date and Citation History	Date of publication: March 2018 Cited By: 5

Stated Purpose or Research Question	"Here we conducted a meta-analysis to investigate the effectiveness of fall prevention programs for the older adults in preventing fall-related injuries" (p. 165).
Author's Conclusion	"Results showed that fall prevention programs had a significant effect in preventing fall-related injuries with a small effect size, but a borderline statistically significant effect in preventing fractures…The present study included more studies to show that fall prevention programs for the older adults had a significant effect in preventing fall-related injuries, providing a reference for policy makers and practitioners regarding fall prevention programs for the older adults" (p. 178).
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: This study is relevant because it looks at the effectiveness of fall prevention programs for older adults.
Overall Quality of Article	Overall Quality of Article: Good Rationale: Publication within the last 10 years; information in the journal was very thorough; however, this article has not been cited that many times and the author publication history is moderate

	Overview of Article
Type of article	Overall Type: Review of Research Study Specific Type: A scoping review (in the title)
APA Reference	Keglovits, M., Clemson, L., Hu, Y. L., Nguyen, A., Neff, A. J., Mandelbaum, C., Hudson, M., Williams, R., Silianoff, T., & Stark, S. (2020). A scoping review of fall hazards in the homes of older adults and development of a framework for assessment and intervention. *Australian Occupational Therapy Journal*, *67*, 470-478. https://doi.org/10.1111/1440-1630.12682
Abstract	"Introduction: Comprehensive evaluation and intervention provided by occupational therapists is effective in reducing the presence of fall hazards in the homes of older adults. The purpose of this study was to document known environmental hazards and to update a previous content analysis. A secondary goal reviewed a framework for evaluation and practice. Methods: A comprehensive scoping review of published academic articles was performed from 1996 to 2019 to answer: What environmental hazards have been associated with falls in the homes of community-dwelling older adults? Data was extracted in a standardised critical appraisal worksheet and content analysis was conducted. A review of a conceptual framework for assessment and intervention was conducted by international experts (n = 6) in face-to-face interviews. Results: Fourteen studies met the inclusion criteria for the scoping study. The studies reported 17 in-home environmental hazards: throw rugs/carpets, clutter, cords/wires, poorly placed light switches, items placed too low, items placed too high, no grab bars, toilet seats too low, uneven floor surfaces, slippery/wet surfaces, snowy/icy surfaces, backless/unsupportive shoes, unsteady stairs, inadequate lighting, inadequate heating/cooling, step stools without railings, and pets. Conclusion: A comprehensive list of specific fall hazards in and around the homes of older adults and a guiding framework offers occupational therapists an evidence-based foundation for fall prevention efforts" (p. 470).
Author	Credentials: MSCI, OTD Position and Institution: Program in Occupational Therapy, Washington University School of Medicine in St. Louis, MO Publication History in Peer-Reviewed Journals: Extensive
Publication	Type of publication: Scholarly Peer-Reviewed Journal Publisher: Wiley Online Library Other: Published in the Australian Occupational Therapy Journal

Date and Citation History	Date of publication: May 2020 Cited By: 4
Stated Purpose or Research Question	"The purpose of this study is twofold: First, to update the evidence-based WeHSA for home hazard intervention through a scoping review of literature between 1996 and 2019 for fall hazards in the homes of older adults; and second, to develop, and review by expert panel, a framework for assessment and intervention" (p. 471). WeHSA = Westmead home safety assessment
Author's Conclusion	"The findings of this scoping review strengthen the evidence for the assessment of fall hazards found in and around the homes of older adults. This list of home fall hazards will enable occupational therapists, other fall prevention specialists, and fall prevention researchers to thoroughly assess for safety concerns in the homes of older adults" (p. 476).
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: This article includes an extensive list of potential fall hazards in the home to assess during a home safety evaluation, which I think can be helpful to include in our research.
Overall Quality of Article	Overall Quality of Article: Good Rationale: Very detailed; relates to our topic; credible author; the only area of concern would be that it also includes studies done in the late 90s and early 2000s in the review, however, the scoping review was completed in 2020.

	Overview of Article
Type of article	Overall Type: Review of Research Study Specific Type: Scoping Review (in the title)
APA Reference	Miranda-Duro, M. d. C., Nieto-Riveiro, L., Concheiro-Moscoso, P., Groba, B., Pousada, T., Canosa, N., & Pereira, J. (2021). Occupational therapy and the use of technology on older adult fall prevention: A scoping review. *International Journal of Environmental Research and Public Health, 18*(702), 1-18. https://doi.org/10.3390/ijerph18020702
Abstract	"Introduction: Falls are the second leading cause of accidental or non-intentional deaths worldwide and are the most common problem as people age. The primary purpose of addressing falls is to detect, prevent, treat, and reduce their incidence and consequences. Previous studies identified that multifactorial programs, an interprofessional team, and assistive technology are required to address falls in older adults effectively. Accordingly, the research question is as follows: what are the scope, type of studies, and approaches and strategies to fall risk using technology in the existing occupational therapy literature regarding interventions to address the effects of falls in older adults on daily living? Methods: This scoping review was carried out in January 2020 through Biblioteca Virtual de Salud España, C.I.N.A.H.L., Cochrane Plus, OTSeeker, PubMed, Scopus, and Web of Science. *Results*: Twelve papers were included. We analyzed the year and journal of publication, authors' affiliation, and design of the study, and thematic categories. There were three themes: participants' characteristics, type of intervention, and fall approach and type of technology used. Discussion and Conclusions: The literature obtained is scarce. It is considered to still be an emerging theme, especially when considering the use of technology for occupational therapy" (p. 1).
Author	Credentials: PhD, Assistance and health research master's degree, occupational therapy degree Position and Institution: CITIC, TALIONIS Group, Elviña Campus, University of A Coruna in Spain Publication History in Peer-Reviewed Journals: Extensive
Publication	Type of publication: Scholarly Peer-Reviewed Journal Publisher: MDPI (multidisciplinary digital publishing institute) Other: Published in the International Journal of Environmental Research and Public Health
Date and Citation History	Date of publication: 2021 Cited By: 4

Stated Purpose or Research Question	"…what are the scope, type of studies, and approaches and strategies to fall risk using technology in the existing occupational therapy literature regarding interventions to address the effects of falls in older adults on daily living?" (p. 1) Found in the abstract
Author's Conclusion	"Although falls have been identified as a public health challenge and the importance of technology in our lives is well known, the literature available on the prevention of falls in older adults using technology is scarce. It is considered to be an emerging area, especially when considering the use of technology in occupational therapy" (p. 14).
Overall Relevance to your EBP Question	Overall Relevance of Article: Moderate Rationale: This study could be helpful in our research project because it has good information in the introduction (specifically Table 1 on OT interventions for falls in older adults).
Overall Quality of Article	Overall Quality of Article: Moderate Rationale: The author seems to be credible; This article was not cited that many times; there was a language barrier between the articles reviewed and the scoping review; only one of the researchers carried out including articles in the scoping review (these were all listed in the limitations section of the article).

	Overview of Article
Type of article	Overall Type: Review of Research Study Specific Type: Systematic review and meta-analysis
APA Reference	Teng, B., Gomersall, S. R., Hatton, A., & Brauer, S. G. (2020). Combined group and home exercise programmes in community-dwelling falls-risk older adults: Systematic review and meta-analysis. *Physiotherapy Research International*, *25*(3), 1-19. https://doi.org/10.1002/pri.1839
Abstract	"Objectives: The objectives of this review were to (a) determine the effectiveness of combined group and home exercise programmes on falls risk factors and falls in community-dwelling older adults at risk of falling compared to no exercise controls; and (b) explore adherence and the behaviour change techniques employed in delivering these interventions. Methods: Five databases were selected to identify randomized controlled trials of exercise and/or physical activity interventions to prevent falls or to improve functional performance. PROSPERO CRD42018106111. Results: Eighteen trials involving 5,960 participants were included. Meta-analyses showed significant improvements in mobility after combined programmes measured by five times sit to stand (−1.42 times, 95% confidence interval [CI] −2.00 to −0.83), timed up and go (−0.94 s, 95% CI −1.76 to −0.12), and gait speed (0.05 m/s, 95% CI 0.02 to 0.07), but not single leg stance time, compared to controls. Combined programmes reduced injurious falls rate (0.77, 95% CI 0.65 to 0.91, I2 = 0%) but not rate of falls (0.86, 95% CI 0.68 to 1.08, I2 = 66%) compared to controls. There was no change in physical activity. Adherence ranged from 55–96%, with variability in the method of measurement of adherence. There was no clear relationship between adherence and outcomes. Most interventions used the behaviour change techniques of instruction/rehearsal/demonstration and feedback/monitoring. Conclusion: Group exercise with a home programme resulted in better functional performance and falls-related outcomes compared with a no exercise control group. Further research is needed to identify behaviour change techniques to improve adherence to exercise in this population" (p. 1).
Author	Credentials: Master of Physiotherapy studies (geriatric physiotherapy), senior lecturer Position and Institution: School of Health and Rehabilitation Sciences, The University of Queensland, Brisbane, Queensland, Australia; Health and Social Sciences, Singapore Institute of Technology Publication History in Peer-Reviewed Journals: Limited

Publication	Type of publication: Scholarly Peer-Reviewed Journal Publisher: Wiley Other: Published in the Physiotherapy Research International journal
Date and Citation History	Date of publication: March 2020 Cited By: 3
Stated Purpose or Research Question	"The overall objective of this review was to determine the effectiveness of combined group and home exercise programmes compared with no exercise control interventions on falls risk factors and falls in community-dwelling older adults" (p. 2).
Author's Conclusion	"The results from this review consistently demonstrated that combinations of supervised group exercise and self-directed home exercises could improve functional performance that could, in turn, improve the most common modifiable falls risk factors such as impaired gait, or impaired mobility in community-dwelling older adults with a risk of falling" (p. 14).
Overall Relevance to your EBP Question	Overall Relevance of Article: Moderate Rationale: Since this review found that there are better outcomes associated with fall prevention when patients participate in exercise versus when they do not exercise, these results can support our research question since it is one specific type of intervention that aids in fall reduction.
Overall Quality of Article	Overall Quality of Article: Moderate Rationale: Included trials with many participants; found a positive correlation between exercise and fall prevention; the author doesn't seem credible (limited publication); also only looks at one specific intervention (exercise) for fall prevention

	Overview of Article
Type of article	Overall Type: Review of Research Study Specific Type: Systematic Review
APA Reference	Lo, C. W. T., Tsang, W. W. N., Yan, C. H., Lord, S. R., Hill, K. D., & Wong, A. Y. L. (2019). Risk factors for falls in patients with total hip arthroplasty and total knee arthroplasty: A systematic review and meta-analysis. *Osteoarthritis Cartilage*, *27*(7), 979-993. https://doi.org/10.1016/j.joca.2019.04.006
Abstract	"Objective: Falls are common after total hip arthroplasty (THA) and total knee arthroplasty (TKA). While previous studies have investigated various risk factors for falls in patients following THA and TKA, no systematic reviews have summarized these risk factors. Therefore, the current systematic review aimed to summarize evidence regarding risk factors for falls in patients after THA and/or TKA. Methods: MEDLINE, EMBASE, CINAHL, SPORTDiscus, and Physiotherapy Evidence Database (from inception to June 30, 2018) were searched. The methodological quality and quality of evidence of the included studies were assessed by two independent reviewers. Relevant data regarding participants' characteristics, study design, follow-up time points, and identified risk factors were extracted. Meta- analyses and narrative syntheses were performed. Results: Twelve studies with a total of 1,292,689 participants were included. Twenty-nine identified risk factors for post-THA/TKA falls were classified into either inpatient or post-discharge risk factors. Key risk factors for both post-THA and/or post-TKA inpatient falls that showed moderate level of evidence included: postoperative complications or comorbidities and revision THA/TKA. Likewise, risk factors for post-discharge falls after THA and/or TKA that demonstrated moderate level of evidence included: medications, psychiatric diseases, living alone, prior history of TKA, falls history and female gender. The quality of the included studies varied and sample sizes were not justified. Conclusions: This review summarized both non-modifiable and modifiable risk factors for post-THA/TKA falls. Our findings highlight the importance of developing strategies to lower the falls risk among patients following THA/TKA" (p. 979).
Author	Credentials: Bachelor of Science, Information Engineering Position and Institution: Department of Rehabilitation Services, Hong Kong Polytechnic University Publication History in Peer-Reviewed Journals: Limited, 8
Publication	Type of publication: Scholarly peer-reviewed Publisher: Osteoarthritis Research Society International Other: Funding Source: The Hong Kong Polytechnic University Start-Up Fund

Date and Citation History	Date of publication: July 2019 Google Scholar Cited By: 19
Stated Purpose or Research Question	"...this systematic review aimed to synthesize the evidence on risk factors for falls among patients after THA/TKA. These findings may help develop appropriate screening to guide fall prevention strategies after THA/TKA" (p. 980).
Author's Conclusion	"Based on the moderate level of evidence, postoperative complications or comorbidities such as electrolyte/fluid imbalance, coagulopathy and revision THA/TKA are key risk factors for inpatient falls. Simi- larly, medications, psychiatric diseases, living alone, prior history of TKA, a history of falls, and female gender are key risk factors for post-discharge falls that showed moderate level of evidence" (p. 991).
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: This article explores risk factors for falls in patients for two types of joint replacement surgeries. Conclusions drawn in the study address elements that we can use to inform the fall prevention interventions as addressed in our EBP question.
Overall Quality of Article	Overall Quality of Article: Good Rationale: This study was funded by and conducted at a reputable research institution. It was published within the last five years in a peer-reviewed journal. This article has been cited by 19 other peer-reviewed articles, indicating its validity to other researchers.

	Overview of Article
Type of article	Overall Type: Review of Research Specific Type: Systematic Review - Retrospective review of an administrative database.
APA Reference	Dieter, W. B., Collins, J. P., & Guccione, A. A. (2019). Predicting outcomes within an innovative post-acute rehabilitation model for older adults. *BMC Geriatrics*, *19*(1), 1-9. https://doi.org/10.1186/s12877-019-1147-6
Abstract	"Background: Understanding the provision of health services to community-dwelling older adults is of great importance due to regulatory changes within post-acute care. The aim of this study was to illustrate pathways by which older adults, within an innovative post-acute care delivery model, move to either independence or readmission back into higher levels of care to maximize the value of rehabilitation delivery. Methods: Clinical data specific to an episode of care (n = 30,001) provided to Medicare beneficiaries treated via a rehabilitation house-calls model of care in their homes and senior living communities were separated into training and test sets. Classification trees were fit on the training set's administrative and clinical variables. Descriptive statistics were calculated for the overall sample, patient characteristics, clinical characteristics, and clinical outcomes. Results: Subjects were 83.3 years on average, 69.4% were female, and 62.2% were seen in their own homes while 37.8% were in senior living. The key variables predictive of progressing to independence were total number of visits, the presence of the Patient Specific Functional Scale (PSFS), PSFS score at discharge and change in PSFS. Prediction accuracy of the classification tree on the test set was 82.4%. Conclusions: Older adults progress to a higher degree of independence, instead of higher levels of care, via several distinct pathways within a rehabilitation house-calls model of care. A mix of service utilization and outcome variables are key predictors of each pathway and may be used to maximize the value of service delivery. Further examination of the predictors of outcome using administrative datasets drawn from different subsets of older adults across the post-acute care continuum is warranted."
Author	Credentials: William B. Dieter, DPT, Physical Therapy specialist in Cherry Hill NJ Publication History in Peer-Reviewed Journals: extensive (612 results in google scholar)
Publication	Type of publication: peer review journal article Publisher: BMC Geriatrics
Date and Citation History	Date of publication: 27, May 2019 Cited By: 1

Stated Purpose or Research Question	"The aim of this study was to illustrate pathways by which older adults receiving rehabilita- tion house calls might move to either independence or readmission back into higher levels of care to in- fluence the value of this innovative care delivery model inside and outside of the US." (p. 2)
Author's Conclusion	"We identified several dis- tinct pathways by which patients progressed to a higher degree of independence rather than higher levels of care. This innovative model of post-acute care should be em- phasized to enhance access as post-acute care regula- tions evolve." (p. 8)
Overall Relevance to your EBP Question	Overall Relevance of Article: poor Rationale: This article is really heavily focused on medicare and that is not very important to our EBP question.
Overall Quality of Article	Overall Quality of Article: Moderate Rationale: This is a decent article. There is good research and information in this article. It could be a little more clear in some areas.

	Overview of Article
Type of article	Overall Type: Review of Research Study Specific Type: Systematic Review
APA Reference	Stark, S., Keglovits, M., Arbesman, M., & Lieberman, D. (2017). Effect of home modification interventions on the participation of community-dwelling adults with health conditions: A systematic review. The American Journal of Occupational Therapy, 71(2), 1-11A. http://dx.doi.org/10.5014/ajot.2017.018887
Abstract	"OBJECTIVE. This systematic review investigated the role of home modification interventions to improve participation outcomes for community-living adults and older adults METHOD. Thirty-six articles met the inclusion criteria. The majority of the studies investigated older adult populations and used occupational therapists as interventionists. RESULTS. Strong evidence was found for home modification interventions to improve function for people with a variety of health conditions and for both single and multicomponent interventions that included home modifications to reduce the rate and risk of falls among older adults. Moderate evidence was found for improved caregiving for people with dementia. CONCLUSION. Comprehensive, higher intensity interventions demonstrated greater efficacy to improve occupational performance. Emerging evidence was also found for the role of occupational therapy in providing effective home modification interventions. Implications for occupational therapy practice, education, and research are discussed." (p. 1)
Author	Credentials: PhD, OTR/L, FAOTA Position and Institution: Assistant Professor of OT, NEurology, and Social Work at Washington University Publication History in Peer-Reviewed Journals: Extensive
Publication	Type of publication: Scholarly Peer-Reviewed Journal Publisher: American Occupational Therapy Association (AOTA) Other: Official journal of the AOTA
Date and Citation History	Date of publication: February 3, 2017 Cited By: 83
Stated Purpose or Research Question	" The purpose of this systematic review was to update previous reviews and explore the evidence for the effectiveness of home modification interventions within the scope of occupational therapy practice for adults and older adults to support home and community participation, which is broadly defined as involvement in a life situation. In addition to updating the evidence, we conducted a thematic analysis to identify additional outcomes and populations of interest to occupational therapy." (p. 2)
Author's Conclusion	"The results of this review provide occupational therapists with the latest evidence to guide practice in home modifications. This systematic review identified three outcome areas—(1) improved functional performance, (2) reduced risk of falls, and (3) reduced demands on caregivers—that address key areas that allow adults who are aging or living with disabilities to remain

	in the community. Use of home modifications resulted in improved function, increased ability to provide care, and decreased falls for people with a broad range of impairments." (p. 8)
Overall Relevance to your EBP Question	Overall Relevance of Article: Moderate Rationale: Provides us with interventions utilized in a home modification that can reduce the risk of falls which correlates to our EBP Question. It also looks at older adults as participants in these studies. However, the review does not solely focus on just falls or older adults which are the main objectives in our question. The study did highlight specific occupational therapy interventions as well as the future implications for occupational therapy
Overall Quality of Article	Overall Quality of Article: Good Rationale: Within 10 years, an established author with many articles published, has specific criteria when choosing review articles, article did identify risks or limitations of articles/the review

	Overview of Article
Type of article	Overall Type: Review of Research Study Specific Type: a systematic review
APA Reference	Elliott, S., & Leland, N. E. (2018). Occupational therapy fall prevention interventions for community-dwelling older adults: A systematic review. *The American Journal of Occupational Therapy*, *72*(4), 1–22. http://dx.doi.org/10.5014/ajot.2018.030494
Abstract	"OBJECTIVE. Accidental falls among community-dwelling older adults are preventable and increase the risk of morbidity, hospitalization, and institutionalization. We updated and broadened a 2008 systematic review examining the evidence for the effectiveness of fall prevention interventions in improving fall-related outcomes, occupational performance, quality of life, and health care facility readmissions for community-dwelling older adults.METHOD. We searched and analyzed literature published from 2008 to 2015 from five electronic databases. RESULTS. Fifty articles met the inclusion criteria and were critically appraised and synthesized—37 provided Level I; 5, Level II; and 8, Level III evidence. Analysis was organized into four intervention themes: single component, multicomponent, multifactorial, and population-based. Mixed evidence was found for single-component and multifactorial interventions, strong evidence was found for multicomponent interventions, and moderate evidence was found for population-based interventions.CONCLUSION. These findings can inform the delivery and integration of fall prevention interventions from acute care to community discharge." (p. 1)
Author	Credentials: DHS, GCG, OTR/L, BCG, FAOTA Position and Institution: Healthy Aging Specialist, Pitt County Council on Aging, Greenville, NC Publication History in Peer-Reviewed Journals: extensive
Publication	Type of publication: scholarly peer-reviewed article Publisher: American Occupational Therapy Association (AOTA) Other: Official journal of the AOTA
Date and Citation History	Date of publication: 5/1/2018 Cited By: 34
Stated Purpose or Research Question	"What is the evidence for the effect of fall prevention interventions on fall-related outcomes, occupational performance, quality of life (QOL), and health care facility readmissions for community-dwelling older adults?" (p. 2)
Author's Conclusion	"Overall, mixed evidence was found regarding the use of single-component fall prevention interventions.Moderate evidence was found for the use of population-based fall prevention interventions; because of inconsistencies in findings in 3 studies, the evidence could not be qualified as strong.Mixed evidence was found for these interventions because of inconsistent or conflicting findings. Of the 19 studies in this theme, 8 (7 RCTs and 1 Level III study) found positive effects on outcomes, such as reductions in fall risk,

	number or rate of falls, injurious falls, and fear of falling or improvements in balance confidence, balance and mobility skills, awareness of fall reduction strategies, and use of measures to reduce fall risk." (pp. 4-6)
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: provides a multitude of relevant and useful interventions for fall prevention, and specifies directly to older adults which both are important components of our EBP questions. Provides a lot of references and resources for other articles about fall prevention and interventions for older adults.
Overall Quality of Article	Overall Quality of Article: Good Rationale: Established author and article is cited by others. Established and reputable publisher. All articles have to meet inclusion criteria and authors noted limitations.

	Overview of Article
Type of article	Overall Type: Conceptual Review Specific Type: Conceptual review involving a search of nine databases.
APA Reference	Harrison, J., Phoong, K. Y., & Hill, J. (2021). Fall prevention programmes for older adults in the community: Impact on rate of falls. *British Journal of Community Nursing*, *26*(11), 540–543. https://doi.org/10.12968/bjcn.2021.26.11.540
Abstract	"In the article, the authors present their study to reevaluate the efficacy of physical activity in reducing the rates of falls among older people in Great Britain and the effects of fall prevention programmes. Also cited are the effects of falls on said people's social participation, mental health, morbidity and mortality, as well as an update of the World Health Organization (WHO) guidelines on falls." (p. 540)
Author	Credentials: Joanna Harison, *Research Fellow, Synthesis, Economic Evaluation and Decision Science Group (SEEDS), University of Central Lancashire, Preston* Publication History in Peer-Reviewed Journals: Extensive (332 results on google scholar)
Publication	Type of publication: Scholarly, peer reviewed article Publisher: British Journal of Community Nursing Other:
Date and Citation History	Date of publication: November, 2021 Cited By: has not been cited
Stated Purpose or Research Question	"This article presents a commentary on Sherrington et al's (2020) updated review on the association between physical activity and falls prevention in older adults." (p. 540)
Author's Conclusion	"The process of the systematic review was evaluated using the Amstar2 critical appraisal tool and scored 12/16. The unfulfilled criteria referred to elements of the included studies that were not clearly reported in the review, such as the types of control group, sources of funding and the impact of reported bias." (p. 542) "The delivery of exercise programmes for falls prevention can be flexible in terms of who delivers them and whether they are completed on an individual or group basis." (p. 542)
Overall Relevance to your EBP Question	Overall Relevance of Article: moderate Rationale: I think that this article is moderately relevant because I think that this article has good information on fall prevention, however, it is a review of a review, so a systematic review, or primary research article would be more relevant to the evidence based practice question.
Overall Quality of Article	Overall Quality of Article: moderate Rationale: This article is of moderate quality, however, it is a review of a review of a study, so it has secondary information coming from the original

	review of the study. There is good informative content about the original review of the study.

	Overview of Article
Type of article	Overall Type: Review of Research Study (meta-analysis) Specific Type: "We conducted a meta-analysis of studies comparing community-dwelling older adults' fall related efficacy to measures of activity or participation" (p.137)
APA Reference	Schepens, S., Sen, A., Painter, J. A., & Murphy, S. L. (2012). Relationship between fall-related efficacy and activity engagement in community-dwelling older adults: A meta-analytic review. *The American Journal of Occupational Therapy*, *66*(2), 137–148. https://doi.org/10.5014/ajot.2012.001156
Abstract	"OBJECTIVE. Fear of falling can lead to restricted activity, but little is known about how this fear affects different aspects of people's lives. This study examined the relationship between fall-related efficacy (i.e., confidence or belief in one's ability to perform activities without losing balance or falling) and activity and participation. METHOD. We conducted a meta-analysis of studies comparing community-dwelling older adults' fall related efficacy to measures of activity or participation. RESULTS. An examination of 20 cross-sectional and prospective studies found a strong positive relationship between fall-related efficacy and activity (r 5 .53; 95% CI [.47, .58]). An insufficient number of studies examining fall-related efficacy and participation were available for analysis. CONCLUSION. Low fall-related efficacy may be an important barrier to occupational engagement for many older adults and warrants careful consideration by occupational therapists. Future research should explore interventions that target fall-related efficacy and examine their effects on activity performance and engagement" (p.137).
Author	Credentials: PhD, OTR Position and Institution: Postdoctoral Fellow, Department of Physical Medicine and Rehabilitation, Institute of Gerontology, University of Michigan, Publication History in Peer-Reviewed Journals: Moderate 11
Publication	Type of publication: Peer-reviewed Publisher: The American Journal of Occupational Therapy Other: N/A
Date and Citation History	Date of publication: 2012 Cited By: 97
Stated Purpose or Research Question	"The research described in this article aimed to answer two questions:

	1. What are the relationships between fall-related efficacy and measures of activity and participation in community-dwelling older adults? 2. Does the strength of these relationships vary depend- ing on the type of fall-related efficacy scale and type of activity assessed?" (p. 138).
Author's Conclusion	"Our meta-analysis found fall-related efficacy to be strongly related to measures of activity and performance in community-dwelling older adults. These findings high-light the potential need to address fall-related efficacy when promoting occupational engagement in this population" (p. 145-146).
Overall Relevance to your EBP Question	Overall Relevance of Article: Moderate Rationale: Continuing activity and occupational performance is crucial to fall-related efficacy and confidence. As function and occupational involvement increases, we must work fall-related efficacy into occupational engagement. Which is good to keep in mind for our case.
Overall Quality of Article	Overall Quality of Article: Good Rationale: The author seems to be well researched in this area. This article has also been cited by 97 other articles, so it seems to be trusted research.

	Overview of Article
Type of article	Overall Type: Review of Research Study (scoping review) Specific Type: scoping review
APA Reference	Wu, S. Y. F., Brown, T., & Yu, M. (2020). Older adults' psychosocial responses to a fear of falling: A scoping review to inform occupational therapy practice. *Occupational Therapy in Mental Health*, *36*(3), 207–243. https://doi.org/10.1080/0164212X.2020.1735977
Abstract	"Falls in older adults are a major health concern, yet the "fear of falling", a common psychosocial response that can occur post-fall, has seldom been investigated. A scoping review was conducted to identify and map interventions that occupational therapists can use to manage the fear of falling psycho-social response (FoFPR) among older adults. Thirteen electronic databases were searched and 22 studies were retrieved. Cognitive behavioral therapy, guided imagery, and Tai Chi were interventions found to help older adults deal with their FoFPRs. Occupational therapists assisting older adults in this area can play a significant role" (p.207).
Author	Credentials: Could not locate on Monash University's website Position and Institution: Department of Occupational Therapy, School of Primary and Allied Health Care, Faculty of Medicine, Nursing, and Health Sciences, Monash University – Peninsula Campus, Frankston, Australia Publication History in Peer-Reviewed Journals: Limited
Publication	Type of publication: peer reviewed Publisher: Taylor & Francis Other: N/A
Date and Citation History	Date of publication: 2020 Cited By: 3
Stated Purpose or Research Question	"Therefore, this scoping review aims to provide an overview of the current interventions that have been used to manage psychosocial responses to falls among older adults who have or have not experienced a fall. The secondary aim of the scoping review is to suggest a range of best-practice recommendations that can be used by occupational therapists to manage psychosocial responses to fear of falling among older adults" (p.208-209).
Author's Conclusion	"The ultimate aim of this project was to inform the practice of occupational therapists who may work with older adults who have sustained a fall while in hospital and then developed a psychosocial fear of falling response to the event. By using evidence-based interventions for this client group, occupational therapists can assist older adults to stay active, safe, and independent (AOTA, 2017)" (p. 240).
Overall Relevance to	Overall Relevance of Article: Good

your EBP Question	Rationale: Although this article also takes a psychosocial perspective, I believe it will be relevant to our EBP question. Specifically, the author's conclusion highlights how falling in the hospital could impact the transition to home, which we are looking at in our case. Fall prevention must be a priority at the hospital and at home, otherwise that may impact the transition to home.
Overall Quality of Article	Overall Quality of Article: Moderate Rationale: In google scholar, this author had not written many articles and this article is only cited by 3 other articles. However, this study is newer and it seems to apply to the case in regards to fall prevention.

	Overview of Article
Type of article	Overall Type: Review of Research Study Specific Type: Systematic review and meta-analysis
APA Reference	Liu, Y., Yang, Y., Liu, H., Wu, W., Wu, X., & Wang, T. (2020). A systematic review and meta-analysis of fall incidence and risk factors in elderly patients after total joint arthroplasty. *Medicine (Baltimore), 99*(50), 1-13. https://doi.org/10.1097/MD.0000000000023664
Abstract	"Background: Falls in the elderly have become a serious social problem worldwide. Approximately a third of persons fall at least once in the year after total joint arthroplasty (TJA), but preventing and treating falls is still challenging in clinical practice. Until now, no formal systematic review or meta-analysis was performed to summarize the risk factors of falls after TJA. The present study aimed to quantitatively and comprehensively conclude the risk factors of falls after TJA in elderly patients. Methods: The electronic databases to be searched include CNKI, Embase, Medline, and Cochrane central database (all up to November 2018). All studies on the risk factors of falls after TJA in elderly patients without language restriction were reviewed. Process of evaluation of identified studies and extraction of data were independently conducted by 2 reviewers, qualities of included studies were assessed using the Newcastle–Ottawa Scale. Data were pooled and a meta-analysis completed. All analyses were performed by the software Stata 11.0. Results: A total of 14 studies were included, which altogether included 1284456 patients with TJA, of them 12879 cases of falls occurred after surgery, suggesting the accumulated incidence of 13.1% and the prevalence of in-hospital falls was 1.0%. This study has provided evidence for the prevention of falls in the elderly patients who were underwent TJA. Outcome measures include advanced age, female, Overweight (BMI≥25 kg/m2), falls history, use of walking aid, diabetes, cardiac disease, hypertension, COPD and depressive symptoms. The ABC Scale was significantly negatively correlated with falls after lower extremity joint replacement. Conclusions: Related prophylaxis strategies should be implemented in elderly patients involved with above-mentioned risk factors to prevent falls after TJA" (p. 1).
Author	Credentials: MD Position and Institution: Department of Orthopaedics and Traumatology, Cangzhou Hospital for Integrated Traditional Chinese and Western Medicine Publication History in Peer-Reviewed Journals: Unavailable
Publication	Type of publication: Scholarly peer-reviewed journal Publisher: Wolters Kluwer
Date and Citation History	Date of publication: November 8, 2020 Google Scholar Cited By: 25

Stated Purpose or Research Question	"Until now, no formal systematic review or meta-analysis was performed to summarize the risk factors of falls in the elderly after lower extremity joint replacement to obtain a definitive conclusion. Therefore, in this study, we summarized these risk factors from the previous original research and conducted a meta-analysis that will be most informative in guiding clinicians for identifying high risk patients and help clinicians to prevent postoperative falls and improve the prognosis of patients" (p. 2).
Author's Conclusion	"Results in this meta-analysis suggested the accumulated incidence of 13.1% and the prevalence of in-hospital falls was 1.0%. Fall prevention interventions have been extensively studied and found to be effective...Fall incidence and associated injuries may be potentially reduced by identifying patients at increased risk and providing intervention delivered by rehabilitation clinicians pre- or post-operatively to reduce fall risk and subsequent injury in these patients" (pp. 5, 11).
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: Outcomes of this study may be used to directly inform falls prevention in older adults. Researchers conclude the study by providing recommendations for clinicians for best practices for preventing falls.
Overall Quality of Article	Overall Quality of Article: Good Rationale: This study was cited in 25 other articles on Google Scholar. The researchers in this study included a wide range of 14 sources in their review. They obtained their sample from four databases: CNKI, Embase, Medline, and Cochrane. This wide range of studies provided a combined participant sample size of 1,284,456, making the results derived highly generalizable.

	Overview of Article
Type of article	Overall Type: Review of Research Study Specific Type: Systematic review
APA Reference	Moutzouri, M., Gleeson, N., Billis, E., Tsepis, E., Panoutsopoulou, I., & Gliatis, J. (2017). The effect of total knee arthroplasty on patients' balance and incidence of falls: A systematic review. *Knee Surgery, Sports, Traumatology, Arthroscopy*, *25*(11), 3439-3451. http://doi.org/10.1007/s00167-016-4355-z
Abstract	"Purpose: Despite the high incidence of falls in patients with OA, few studies have explored whether falls risk is affected after patients undergo total knee arthroplasty (TKA). Therefore, the aim of this systematic review was to identify the extent of the effects of TKA on balance and incidence of falls by critically reviewing the available literature. Methods: A systematic review of published literature sources was conducted up to March 2014. All studies assessing balance and incidence of falls after TKA (without physiotherapeutic intervention) were included. The meth- odological quality of each study was reviewed using the Critical Appraisal Skill Programme tool. Results: Thirteen studies were included, comprising of ten cohort studies (Level II) and three studies with Level of evidence III. Conclusions:Findings provide evidence that TKA improves significantly single-limb standing balance (~60%) and dynamic balance up to 1-year following surgery (Level of evidence II). Moreover, TKA influences positively fear of falling and incidence of falls by switching 54.2 % of pre- operative fallers to post-operative non-fallers (Level of evi- dence II–III). It is highlighted that knee extension strength, proprioception and symmetrization of postural strategies have not fully recovered post-TKA and influence balance performance. Clinically, these persistent deficits need to be mitigated by physiotherapy even before TKA takes place" (p. 3439).
Author	Credentials: PhD Physiotherapy, MACP Position and Institution: Department of Physiotherapy, Technological Educational Institute Publication History in Peer-Reviewed Journals: Limited, 1
Publication	Type of publication: Scholarly peer-reviewed Publisher: Springer
Date and Citation History	Date of publication: December 5, 2015 Google Scholar Cited By: 49
Stated Purpose or Research Question	"Understanding of the mechanisms associated with the recovery of the systems that control balance and the specific residual problems after surgery may ultimately help to enhance the design of rehabilitation programmes using approaches that are justified by scientific evidence. Based on this rationale, the novel aim of this study was to conduct a systematic review in order to identify the effects of TKA on balance and on the incidence/ risk of falls" (p. 3440).

Author's Conclusion	"The most important finding of the present study was that TKA influences positively (a) fear of falling and incidence of falls by switching 54.2 % of pre-operative fallers to post-operative non-fallers and (b) balance for up to 1-year following surgery" (p. 3444).
Overall Relevance to your EBP Question	Overall Relevance of Article: Moderate Rationale: This article addresses several key PICO aspects of our EBP research question. It gathers data on the incidence of falls in patients with total knee arthroplasty, although it does not draw considerations for fall prevention. Findings explore physical barriers to balance and function following TKA.
Overall Quality of Article	Overall Quality of Article: Good Rationale: This article was published by a reputable publisher in a peer-reviewed journal. Each of the four authors is affiliated with an institution related to health or health sciences. The reference list is extensive, and thus, data was derived from a breadth of perspectives.

	Overview of Article
Type of article	Overall Type: Review of Research Study- Literature Guide Specific Type: "The central design idea is to lead the user through a learning process including acquiring knowledge of fall prevention, personal characteristics, taking fall prevention action and understanding the outcomes of changed behaviors" (pg. 498).
APA Reference	Aidemark, J., & Askenäs, L. (2019). Fall prevention as personal learning and changing behaviors: Systems and technologies. *Procedia Computer Science*, *164*, 498–507. https://doi.org/10.1016/j.procs.2019.12.212
Abstract	"While living longer at home is the preferred option for the elderly, disease, accidents or general health decline might make this hard. Fall accidents, which are among the chief causes of unforced injury leading to hospitalization, must be viewed as a strong factor working against the possibilities for the elderly of living longer at home. Although many fall prevention programs have been developed and applied, and checklists and advice abound, most of these originate in the professional care area or depend on care professionals. In this paper, we present a fall prevention concept directed towards elderly people living at home, with the intention of providing a safer environment ensuring more years of doing this in a healthy manner. There are several obstacles for a successful implementation of fall prevention, many pending on the attitudes and thought systems of the elderly user community, including low risk awareness, technological stigmata, refusal to be associated with health problems and a general 'not for me' world view. The paper presents an AI/IoT-driven learning environment for fall prevention which facilitates living independently and improved self-understanding to provide for easier everyday living. The central design idea is to lead the user through a learning process including acquiring knowledge of fall prevention, personal characteristics, taking fall prevention action and understanding the outcomes of changed behaviors. The concluding outcome is a discussion of a set of design variables for the effective implementation of fall prevention systems, including a holistic view of fall prevention and aging, open platform technologies, a flexible and adaptable module approach, feedback-based learning, IoT/sensor-driven learning, personalization and goal orientation and the dual use of technology avoiding technology stigmas" (p.498).
Author	Credentials: Jan Aidemark, no credentials available Position and Institution: Linnaeus University, Associate Professor Department of Informatics and Faculty of Technology Publication History in Peer-Reviewed Journals: Extensive, 30+ articles
Publication	Type of publication: scholarly peer-reviewed journal Publisher: Elsevier B.V.
Date and Citation History	Date of publication: 2019, available online January 28, 2020 Cited By: 4

Stated Purpose or Research Question	"The central design idea is to lead the user through a learning process including acquiring knowledge of fall prevention, personal characteristics, taking fall prevention action and understanding the outcomes of changed behaviors" (p. 498).
Author's Conclusion	"The concluding outcome is a discussion of a set of design variables for the effective implementation of fall prevention systems, including a holistic view of fall prevention and aging, open platform technologies, a flexible and adaptable module approach, feedback-based learning, IoT/sensor-driven learning, personalization and goal orientation and the dual use of technology avoiding technology stigmas" (p. 498).
Overall Relevance to your EBP Question	Overall Relevance of Article: Moderate Rationale: This article is good for background information about older adults and fall prevention. You would not want to use this article as the only source of information but in addition to primary research studies.
Overall Quality of Article	Overall Quality of Article: Moderate Rationale: Author is credible and has several other peer-reviewed journal articles. However, no limitations were listed, and the article would be considered a review of the literature. No research or study was conducted other than a cumulation of information from a search of current literature.

	Overview of Article
Type of article	Overall Type: Review of Research Study Specific Type: Scoping Review
APA Reference	Chen, S.K., Voaklander, D., Perry, D., & Jones, C.A. (2019) Falls and fear of falling in older adults with total joint arthroplasty: a scoping review. *BMC Musculoskeletal Disorders, 20* (1), 1-8. https://doi.org/10.1186/s12891-019-2954-9
Abstract	"Background: Patients waiting or recovering from total joint arthroplasty (TJA) are at risk for falls which can lead to restriction of activity and negatively impact recovery. The objective of this scoping review is to critically appraise and synthesize the evidence in the reported number of falls, fear of falling, and risk factors associated with falls in older patients waiting for or recovering from TJA. Methods: Seven electronic databases were searched with no date limits and using language restriction (English). The inclusion criteria were 1) cohorts that included older adults 60+ years of age, 2) reported prevalence of falls, fear of falling, and/or risk factors for falls in patients who were waiting or recovering from TJA and 3) cross-sectional studies, cohort studies, and case control study designs. The quality assessment of selected articles was assessed using the SIGN Guidelines Checklist. Results: Of the 866 citations identified, 12 studies met the inclusion criteria and were reviewed. Prevalence of falls in pre-operative TJA patients and post-operative TJA patients ranged from 23 to 63%, and 13 to 42%, respectively. Of those five studies that examined fear of falling, pre-operative TJA patients reported greater fear of falling than post-operative patients. Modifiable risk factors for falls included fear of falling, joint range of motion, and depression. Conclusions: An increased risk of falls in patients with TJA was reported both for patients waiting for and recovering from surgery. A number of modifiable risk factors were identified including fear of falling that could be targeted in fall prevention programs for TJA." (p.1)
Author	Credentials: Unable to locate Position and Institution: School of Public Health, University of Alberta Publication History in Peer-Reviewed Journals: 1- limited
Publication	Type of publication: Peer- Reviewed Journal Publisher: Springer Nature Other: Found in BMC musculoskeletal disorders
Date and Citation History	Date of publication: December 12th, 2019 Cited By: 6

Stated Purpose or Research Question	"The purpose of this scoping review is to critically appraise and synthesize the evidence for falls in patients with TJA and to map current evidence of falls, fear of falling and risk factors associated with falls in TJA patients during the perioperative period." (p.2)
Author's Conclusion	"The findings from this scoping review suggest there are a number of intrinsic risk factors for falling in patients with TJA, both pre- and post-operative, yet further investigation needs to examine extrinsic risk factors." (p.7)
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: The article related to our question about risk factors that can be modified to prevent falls and fear of falling. The article found an increased risk of falling and fear of falling after someone underwent a total joint arthroplasty. This can be used to answer our question about how to implement fall prevention strategies for older adults being that this article provides a good list of risk factors for falling and we can use those risk factors to identify how to best eliminate those factors as an occupational therapist to create a fall prevention plan.
Overall Quality of Article	Overall Quality of Article: Good Rationale: The article found good results being that it was a scoping review that found several risk factors for falls including type of joint replacement arthroplasty, joint specific pain, stiffness, & function, joint range of motion, and number of comorbid conditions. These results expand more on fall and fear of falling in older adults than most studies do meaning we can use this article for a wide array of risks and fears of risk to help answer our EBP question.

	Overview of Article
Type of article	Overall Type: Review of Research Study Specific Type: Systematic review – meta analysis
APA Reference	Valenzuela, P. L., Morales, J. S., Castillo-García, A., Mayordomo-Cava, J., García-Hermoso, A., Izquierdo, M., Serra-Rexach, J. A., & Lucia, A. (2020). Effects of exercise interventions on the functional status of acutely hospitalised older adults: A systematic review and meta-analysis. *Ageing Research Reviews*, *61*, 101076. https://doi.org/10.1016/j.arr.2020.101076
Abstract	"Background: Acute hospitalisation can have adverse effects in older adults, notably functional decline. We aimed to summarize evidence on the effects of exercise interventions in acutely hospitalised older adults. Methods: Relevant articles were systematically searched (PubMed, Web of Science, Rehabilitation & Sports Medicine Source, and EMBASE) until 19th March 2020. Randomized controlled trials (RCTs) of in-hospital exercise interventions versus usual care conducted in older adults (>60yrs) hospitalised for an acute medical condition were included. Methodological quality of the studies was assessed with the PEDro scale. Primary outcomes included functional independence and physical performance. Intervention effects were also assessed for other major outcomes (length of hospital stay, incidence of readmission, and mortality). A meta-analysis was conducted when ≥3 studies analysed the same outcome. Results: Fifteen studies from 12 RCTs (n = 1748) were included. Methodological quality of the studies was overall high. None of the studies reported any adverse event related to the intervention. Exercise interventions improved functional independence at discharge (standardized mean difference [SMD] = 0.64, 95% confidence interval = 0.19–1.08) and 1–3 months post-discharge (SMD = 0.29, 95%CI = 0.13–0.43), as well as physical performance (SMD = 0.57, 95%CI = 0.18–0.95). No between-group differences were found for length of hospital stay or risk of readmission or mortality (all $p > 0.05$). Conclusions: In-hospital supervised exercise interventions seem overall safe and effective for improving – or attenuating the decline of – functional independence and physical performance in acutely hospitalised older adults. The clinical relevance of these findings remains to be confirmed in future research."
Author	Credentials: Not found Position and Institution: Department of Systems Biology, University of Alcalá, Madrid, Spain Publication History in Peer-Reviewed Journals: 34- Extensive
Publication	Type of publication: Peer-reviewed journal Publisher: Elsevier

	Other: Science Direct
Date and Citation History	Date of publication: August 2020 Cited By: 22
Stated Purpose or Research Question	"The present systematic review and meta-analysis of randomized controlled trials (RCTs) aimed to summarize evidence on the effects of exercise interventions in acutely hospitalised older adults compared with usual care, with a particular focus on functional independence and physical performance, as well as on other clinical outcomes including length of hospital stay, incidence of readmission, and mortality" (p.2)
Author's Conclusion	"In-hospital supervised exercise interventions appear to be safe and effective for improving – or attenuating the decline of – functional independence and physical performance in older adults hospitalised for an acute medical condition" (p.11)
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: The article summarizes well the effects of exercise interventions for acutely hospitalized older adults.
Overall Quality of Article	Overall Quality of Article: Good Rationale: Article quality is good- it summarizes the articles well and is easy to read and it applies to the sub-acute part of our EBP question. This article had good information on how acute hospitalization stays supervised exercise interventions helped after a joint replacement surgery. This study can be used to help answer the part of our question related to skillable interventions with older adults after joint replacement surgery.

	Overview of Article
Type of article	Overall Type: Review of Research Study Specific Type: Scoping Review
APA Reference	Si, H. B., Zeng, Y., Zhong, J., Zhou, Z. K., Lu, Y. R., Cheng, J. Q., Ning, N., & Shen, B. (2017). The effect of primary total knee arthroplasty on the incidence of falls and balance-related functions in patients with osteoarthritis. Scientific Reports, 7(1), 1-9. https://doi.org/10.1038/s41598-017-16867-4
Abstract	Knee osteoarthritis (OA) is an established risk factor for falls and balance impairment. This study investigated the incidence of falls, balance-related outcomes and risk factors for falls before and after primary total knee arthroplasty (TKA). Three hundred seventy-six OA patients scheduled to undergo TKA were included. Falls data within the preoperative, first postoperative and second postoperative years were collected, balance-related functions were assessed using the Assessment of Quality of Life (AQoL), WOMAC, Falls Efficacy Scale International (FES-I), Activities-specific Balance Confidence (ABC), knee extension strength, Berg Balance Scale (BBS) and Timed Up and Go (TUG) before surgery and 1 and 2 years after surgery. Compared with preoperative values, the incidence of falls significantly decreased (14.89%, 6.23% and 3.14% within the preoperative, first postoperative and second postoperative years, respectively) and the AQoL, WOMAC, FES-I, ABC, knee extension strength, BBS and TUG significantly improved after TKA. Logistic regression analysis revealed that Kellgren-Lawrence grade ≥ 3 of the contralateral knee was an independent risk factor for falls before and after TKA. Conclusively, primary TKA is associated with a reduced incidence of falls and improved balance-related functions, and the contralateral knee should be considered in the design of fall-prevention strategies in patients with OA. (p. 1)
Author	Credentials: Not found Position and Institution: Department of Orthopedics, West China Hospital, Sichuan University, Chengdu, China Publication History in Peer-Reviewed Journals: 29- Extensive
Publication	Type of publication: Peer-reviewed journals Publisher: Springer Nature
Date and Citation History	Date of publication: November 29th, 2017 Cited By: 22

Stated Purpose or Research Question	"This study investigated the following specific issues: (1) the annual incidence of falls before and after primary TKA; (2) the effect of primary TKA on balance-related outcomes, such as fear of falling, balance confidence and physical functions; and (3) the possible risk factors for falls before and after primary TKA in patients with knee OA." (p.2)
Author's Conclusion	"This study found that the annual incidence of falls, AQoL, WOMAC (total and subscales), FES-I, ABC, knee extension strength, BBS and TUG improved significantly after primary TKA compared to preoperative values. Age (≥70 years), sex (female) and KL grade of the contralateral knee (≥3) were identified as significant independent risk factors for falls in the last preoperative year and the first postoperative year, and the latter was also an independent risk factor for falls in the second postoperative year after primary TKA" (p.5)
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: Part of our EBP was how to reduce falls after joint replacement surgery and this article looks at how to do that.
Overall Quality of Article	Overall Quality of Article: Good Rationale: The article found an increased risk and number of falls from knee arthritis before undergoing a total knee arthroplasty. It was found that significant reduction in fear of falling and an increase in balance confidence were found after a total knee replacement. This article provided good information regarding total knee replacements and how they can positively impact older adults.

Appendix B. Critical Appraisals

Primary Research

	Summary
APA Reference	Wheeler, E., Coogle, C. L., Fix, R. C., Owens, M. G., & Waters, L. H. (2018). Physical and occupational therapy practice improvement following interprofessional evidence-based falls prevention training. Journal of Allied Health, 47(1), 9–18.
Abstract	"AIMS: Evaluate changes in physical therapy (PT) and occupational therapy (OT) practice following evidence-based practice (EBP) interprofessional modules that teach assessments and interventions to reduce falls in community-dwelling older adults. METHODS: Medical records of post-fall patients in three Programs of All-Inclusive Care for the Elderly (PACE) sites were analyzed to assess differences in documented falls and the OT and PT use of EBP assessment and interventions implemented following fall prevention training. RESULTS: In training year 1, PT demonstrated a 34.6% practice improvement in risk assessments performed ($z=3.0$, $p<0.005$). In training year 2, PT demonstrated a 66.7% practice change in the implementation of EBP interventions ($z=2.1$, $p<0.05$), and OT demonstrated a 22.2% practice improvement in the implementation of recommended EBP interventions ($z=2.0$, $p<0.05$). In training year 3, OT achieved a 6.8% increase in the execution of home environment modifications ($z=2.0$, $p<0.05$), and PT demonstrated a 23.3% practice improvement in the implementation of recommended EBP interventions ($z=3.1$, $p<0.005$). CONCLUSION: The delivery of EBP assessment and intervention training modules for falls prevention resulted in PT and OT practice changes and improved adherence to published guidelines." (p. 9)
Your Focused Question and Clinical Bottom Line	Question: What strategies can be utilized to improve OT's use of EBP to reduce fall risks among older adults? Clinical Bottom Line: Providing EBP training modules to interdisciplinary teams increases OT/PT's knowledge and adherence to EBP assessments, interventions, documentation, and home modifications.
Your Lay Summary	This study looked at the effect that additional training would have on the services provided for older adults who have a risk of falling. This additional training was given to healthcare providers about the best programs and exercises for adults with fall risk. Over three years, the researchers collected information from medical charts. They found that the additional training helped reduce the number of falls in the patients they saw. For future research, it would be helpful to continue to find the best programs that can be provided for older adults with fall risk. In

	addition, future research could include in-person training and providers from different companies.
Your Professional Summary	This study was intended to evaluate if implementing a training module for EBP fall risk assessments and interventions would change how Physical Therapists (PT) and Occupational Therapists (OT) provide services for older adults. The researchers conducted a retrospective design study by pulling data from medical charts. The study spanned three years, and the data was divided into three separate years. Overall, the researchers pulled data from the medical charts of twenty-seven providers. The strengths of the study included using an interdisciplinary approach. The researchers pulled data from PTs, OTs, nurse practitioners, physicians, registered nurses, and more; however, the researchers primarily focused on the PTs and OTs. In addition, there was a wide range of demographics included in the sample; therefore, there is a greater external validity and generalizability. Conversely, one of the weaknesses of the study included its small sample size. The researchers only collected data from twenty-seven OTs and PTs from Virginia Programs of All-Inclusive Care for the Elderly (PACE) sites. This decreases the ability of the study to generalize to the public. In addition, the data was collected by an evaluation team; however, the team members' names nor potential biases were documented in the article. The final weakness is the variability in data collected each year. For instance, there was limited data collected for OT in the first year preventing statistics from being computed. Within the article, the researchers did acknowledge a few implications for practice. These included a need for more evidence-based curricula to educate healthcare providers and a potential for better results within-person training versus the online training modules provided in this study. Finally, the researchers stated it would be to analyze the value of the training in future studies.
	Critical Appraisal
Stated Purpose or Research Question	"The purpose of this study was to evaluate PT and OT practice change following the instruction in evidence-based practice (EBP) interprofessional teaching modules focused on EBP assessment and interventions shown to reduce falls in community-dwelling older adults." (p. 10)
Background Literature	Key points of the intro section: "Adults over 65 years old will be 20% of the US population by 2030; therefore, there is a need to prepare our healthcare workers and practices." (pp. 9-10) "Falls are the leading cause of fractures and injuries in older adults." "Causes of falls are multifactorial from intrinsic and extrinsic factors." (pp. 9-10) "A growing body of research on risk factors, interventions, and strategies to prevent falls."(pp. 9-10)

	American Geriatrics Society/British Geriatrics Society (AGS/BGS) "Published clinical guideline for prevention of falls in older persons."(pp. 9-10) "Emphasize including fall risk screening, targeted assessment, and individualized interventions."(pp. 9-10) CDC - STEADI toolkit "Outlines best practice recommendations for fall risk, screening, and interventions."(pp. 9-10) APTA & AOTA "Outline roles of these professionals (OT & PT) in prevention of falls in older adults"(pp. 9-10) "Despite research… falls in older adults continue to be a persistent problem."(pp. 9-10) "Medical record review has been used by other researchers to demonstrate those fall practice guidelines are not fully embraced by practitioners."(pp. 9-10) "Interprofessional instruction designed to modify PT and OT practice behaviors and improve adherence to published fall reduction guidelines may result in fewer falls in older adults" (pp. 9-10) Theoretical perspective: not reported
Research Design	Research design: Retrospective medical records Rationale for the design: Not Reported - Rationale for design could be due to patient privacy and changes in performance with extra persons observing therapy sessions. In addition, the researchers were able to gather data on how the provider's documentation changed as well. For quantitative primary research, AOTA Level of Evidence: Level 3
Sampling	Sampling method used and the rationale (if given). "Medical records from interprofessional clinical practice sites were recruited because the training focused on promoting interprofessional practice" (p. 10). Through a "consensus review process" (p. 10). Inclusion criteria: "at least one year after delivery of EBP training to healthcare practitioners; only patients who fell and received post-fall assessment/intervention from practitioners who received the EBP training" (p. 11) Exclusion criteria: No Exclusion Criteria Power/sample size estimate: Not Reported
Sample	Number of Participants (Total and Subgroups): Year 1 = data collected from 7 providers Year 2 = data collected from 7 providers Year 3 = data collected from 13 providers

	Characteristics of the Sample (Gender, Race/Ethnicity, Diagnosis/Disability): Demographics for practitioners/providers: Gender = 22 Female 4 Male Age = 3 20-29 9 30-39 4 40-49 8 50-59 2 60+ Race = 4 African American, non-Hispanic 2 Asian 18 Caucasian, non-Hispanic 2 Hispanic Highest Degree = Associates = 2 Bachelors = 7 Diploma = 2 Doctorate = 6 Master's = 6 MD = 3 Occupation = Nurse Practitioner = 1 OT = 4 OTA = 1 PTA = 1 PT = 10 Physician = 4 Registered Nurse or BSN = 5 Dropouts: Not reported/applicable
Groups	Types of groups: (e.g., intervention, sample characteristic): Group one (T1) = baseline - patient records that experienced at least one fall in the three months before the site training Group 2 (T2) = 3-month period immediately following the completion of the training Group 3 (T3) = next 3-month period ending 6 months post-training
Method	Primary methods to answer research question (e.g., intervention, interview, survey, chart review) "Nonexperimental within-subjects pre-post intervention design" (p. 11)

	"Data was abstracted from patient medical records… analyzing the effect of practitioner use of EBP increasing after training" (p. 11)
Measurement and Outcomes	Measure: "Evaluation team (comprised of two doctoral-level faculty and three research assistants) assessed clinician practice change by abstracting medical records information" using a "consensus review process." (p. 10) The team did have multiple people look at each data entry which would reduce the opportunity for error. Consensus review process Cited in references as a process from the article "A guide to conducting consensual qualitative research" by Hill et al. and the book "Designing qualitative research" by Marshall & Rossman. A guide to conducting consensual qualitative research October 1997 Abstract: The authors discuss the components of consensual qualitative research (CQR) using open-ended questions to gather data, using words to describe phenomena, studying a few cases intensively, recognizing the importance of context, using an inductive analytic process, using a team, and making decisions by consensus, using auditors, and verifying results by systematically checking against the raw data. The three steps for conducting CQR are developing and coding domains, constructing core ideas and developing categories to describe consistencies across cases (cross-analysis). Criteria for evaluating CQR are trustworthiness of the method, coherence of the results, representativeness of the results to the sample, testimonial validity, applicability of the results, and replicability across models. Finally, the authors discuss implications for research, practice, and training. Cited by 3,658 It appears to be a widely utilized and well-known article. It is noted to be a "major contribution." Designing Qualitative Research Book published in 2014 Addressing the complexity, flexibility, and controversies of qualitative research's many genres, Designing Qualitative Research, Sixth Edition gives students, research managers, policy analysts, and applied researchers clearly, easy-to-understand guidance on designing qualitative research. While maintaining a focus on the proposal stage, this best-selling book takes readers from selecting a research genre through building a conceptual framework, data collection and interpretation, and arguing the merits of the proposal. Cited by 49510 It appears to be widely utilized with multiple editions by well-established authors.
Results	Description of the sample: Results are divided into years 1, 2, & 3 and T1, T2, or T3. In addition, the results are divided into all patient encounters versus PT/OT patient encounters.

	Analysis/theme one: Assessment and intervention practice changes for all post-fall patient encounter Year 1 "PT showed statistically significant improvement in the proportion of document fall causes… from T1-T2 with an increase of 54.6%... as well as between T1 to T3 indicating improvement had been maintained" (p. 13) "No statistically significant practice improvements in the implementation of the recommendation of EBP interventions were found" (p. 13) Year 2 "Medical record review did not reveal any statistically significant practice improvements related to any of the assessment measures" (p. 13) "PTs implementation of AGS/BGS… was not statistically significant" (p. 13) "OT demonstrated a 22.2% practice improvement in the number of interventions implemented ($p<0.05$)" (p. 13) Year 3 "PTs and OTs did not show any statistically significant practice improvements related to the cumulative number of implemented AGS/BGS interventions." "OTs did not reveal any statistically significant practice improvement in the cumulative number of implemented EBP interventions" (p. 13) "OT individual interventions revealed 6.8% improvement of home modification… statistically significant" (p. 13) Analysis/theme two: Assessment and intervention practice changes for all post-fall PT and OT patient encounters Year 1 "PTs demonstrated a robust practice improvement from T1 to T2 in documented fall causes… and sustained at T3 ($p<0.001$)" (p. 13) "No statistically significant practice improvements in recommendations for the implementation of AGS/BGS" (p. 13) Year 2 "No statistically significant practice changes related to any of the assessment measures… due to small number of patient encountered by providers" (p. 13) Year 3 "PTs documentation of risk factors assessed increased by 18.7% (statistically significant) from T1 to T2… and maintained into T3" (p. 16) "PTs… improvement in the cumulative number of AGS/BGS interventions implemented from T1 - T2" (p. 16)

	"No statistically significant practice improvements were uncovered for OT" (p. 16)
Authors' Discussion and Conclusion	Idea one: "interprofessional EBP assessment and intervention training modules for falls prevention and management seem to have a significant effect on PT and OT practice" through increased documentation, interventions, home modifications, and fall risk assessments. (p. 16) Idea two: "PT and OT provide more fall risk assessments and interventions after robust EBP fall prevention training" (p. 17) Idea three: "Increased knowledge…translate to PT and OT's increased identification and documentation of risk factors and interventions" (p. 17) Idea four: "education programs that emphasize best practice recommendations for all fall prevention, like the ones outlined in this paper, show potential to improve PT and OT adherence to published guidelines and thus improve their skills in caring for older adults" (p. 17)
Authors' Limitations	"Medical records may or may not truly reflect some of the details about what happened. Documentation may not differentiate subtle overlaps of assessment and intervention." "Data collecting process counted the frequency of interventions without judgment of quality or appropriateness of chosen interventions." "Training modules in this study, as well as a methodological approach for chart reviews, were time-intensive… limit opportunities to replicate the study." "Poor documentation of risk factors may limit the recommendations provided to the patient" (p. 17)
Authors' Implications For Practice and Future Research	"More comprehensive evidence-based curricula to better educate healthcare providers on fall prevention guidelines could help improve compliance… This approach could be replicated in the future to improve healthcare providers adherence to fall prevention guidelines" (p. 16) "Challenges of delivering the curriculum remotely may partly explain why the assessment changes at these training sites were less robust"(p. 16). Therefore, future research should try an in-person curriculum. "Value of training, however, could have been underreported in this study by the data collection process used to describe change" (p. 16). Therefore, recommended to try different data collection processes to report the value of training accurately.

	Summary
APA Reference	Naseri, C., McPhail, S. M., Haines, T. P., Morris, M. E., Shorr, R., Etherton-Beer, C., Netto, J., Flicker, L., Bulsara, M., Lee, D. C. A., Francis-Coad, J., Waldron, N., Boudville, A., & Hill, A. M. (2020). Perspectives of older adults regarding barriers and enablers to engaging in fall prevention activities after hospital discharge. *Health & Social Care in the Community*, *28*(5), 1710–1722. https://doi.org/10.1111/hsc.12996
Abstract	"Older adults recently discharged from hospital are at high risk of functional decline and falls. A tailored fall prevention education provided at hospital discharge aimed to improve the capacity of older adults to engage in falls prevention activities. What remains unknown are the factors affecting behaviour change after hospital discharge. This study identified the perceived barriers and enablers of older adults to engagement in fall prevention activities during the 6-month period post-discharge. An exploratory approach using interpretative phenomenological analysis focused on the lived experience of a purposive sample (n = 30) of participants. All were recruited as a part of an RCT (n = 390) that delivered a tailored fall prevention education program at three hospital rehabilitation wards in Perth, Australia. Data were collected at 6-month post-discharge using semi-structured telephone surveys. Personal stories confirmed that some older adults have difficulty recovering functional ability after hospital discharge. Reduced physical capability, such as experiences of fatigue, chronic pain and feeling unsteady when walking were barriers for participants to safely return to their normal daily activities. Participants who received the tailored fall education program reported positive effects on knowledge and motivation to engage in fall prevention. Participants who had opportunities to access therapy or social support described more positive experiences of recovery compared to individuals who persevered without assistance. A lack of physical and social support was associated with apprehension and fear toward adverse events such as falls, injuries, and hospital readmission. The lived experience of participants following hospital discharge strongly suggested that they required more support from both healthcare professionals and caregivers to ensure that their needs were met. Further research that evaluates how to assist this population to engage in programs that will mitigate the high risk of falls and hospital readmissions is required." (p. 1710-1711)

Your Focused Question and Clinical Bottom Line	Question: How does a fall prevention plan affect the outcomes of an older adult post-acute care? Clinical Bottom Line: A fall prevention plan can improve health outcomes in older adults after a hospital stay, however, education alone is not enough to fully prepare them for the physical and social barriers they will have to engage in once they return home. Fall prevention interventions are the most influential after discharge from an acute setting.
Your Lay Summary	This article was about stopping older people from falling in their homes after leaving the hospital. They did an interview to find out about older people that had just left a hospital. In the interview process, they called many different older people to ask them questions about what the doctors and other hospital staff told them what to do when they go home, so they do not fall in their home. After these phone calls to older people, they looked at how to help older people when they go home from the hospital, so they do not fall. To help these older people when they go home, the people doing the research said that the older people that are going to go home from the hospital should do activities to prevent falling in their homes. There were a few problems with this. One is that the interviews were over the phone. Since they just called the older people, they could not look at how the people were acting when they were answering the questions.
Your Professional Summary	This journal article is a primary research study of older adults and fall prevention in sub-acute settings. The purpose of this study was to find and analyze perspectives of older adults on fall prevention plans post-acute stay. From the exploratory approach using interpretative phenomenological analysis that was conducted by the researchers, the data collected demonstrate that just an educational program did not change the data of number of falls in homes of older adults, a fall prevention plan is most effective if actual fall prevention activities are included. There is a barrier to being involved in fall prevention absence of opportunities determined by both physical and social environments after older adults arrive home post-acute care. The researchers collected this data by taking a sample of 30 participants through a semi-structured telephone survey. The researchers aimed at getting the personal lived experiences of patients' fall prevention plans in an acute setting and sub-acute setting through asking questions based on the theory of health behavior change. The semi-structured survey included open ended and non-directive questions. In this primary research study there were limitations, first being the semi-structured telephone survey. Due to the survey being over the phone, researchers were unable to read the body language of the participants while the research was being conducted.

	Critical Appraisal
Stated Purpose or Research Question	"The purpose of the current study was to explore perspectives of older adults regarding the barriers and enablers to engagement in fall prevention activities within 6-month after hospital discharge. It was expected that this would inform future intervention designs and clinical practice in this area." (p. 1712)
Background Literature	Key points of the intro section: "The risk of death or serious injury subsequent to a fall increases with age" "Tailoring fall prevention interventions requires the consideration of individual knowledge, circum-stances and preferences for addressing fall risk." "Older adults who have recently been discharged from hospital are at high-risk group for falls injury." (p. 1711) Theoretical perspective: biopsychosocial theory
Research Design	Research design: A qualitative research study in which the researchers conducted a survey for older adults post hospital stay. Rationale for the design:" The focus was on the lived experience of participants, understanding their experiences and perspectives to fall prevention activities, and how these experiences impacted their fall prevention behaviour. Thereby we would identify the barriers and enablers to older adults undertaking fall prevention activities within their life-circumstances after hospital discharge." (p. 1712) This format was chosen to collect data of the participants' lived experiences of fall prevention implementation after a hospital stay. For quantitative primary research, AOTA Level of Evidence: This is a qualitative research study.
Sampling	Sampling method used and the rationale (if given). Inclusion criteria: all were recruited as a part of a RCT that delivered a tailored fall prevention education program at three hospital rehabilitation wards in Perth, Australia. "Purposive sampling of participants (n = 390) who were enrolled in the RCT (Hill et al., 2019) was undertaken. Briefly, these participants were patients aged 60 years and over, recovering from a variety of conditions, with good levels of cognition (inclusion criteria >7/10 on Abbreviated Mental Test Score (Hodkinson, 2012), discharged to the community from three rehabilitation hospitals in Western Australia." (p1712) Exclusion criteria: not included Power/sample size estimate: n=30
Sample	Number of Participants (Total and Subgroups): n=390, purposeful sample: n=30

	Characteristics of the Sample (Gender, Race/Ethnicity, Diagnosis/Disability): Mean age of 78.7, multiple levels of education, 56.67% female Dropouts: 43 out of the 292 participants in which 30 participants were purposely chosen to complete the final interview.
Groups	Types of groups: (e.g., intervention, sample characteristic): purposely approached: n=30 Group one description: the single group was the group that completed the final in depth interview on fall prevention post hospital stay.
Method	Primary methods to answer research question (e.g., intervention, interview, survey, chart review) "The 'double hermeneutic' phenomenological approach involved the researcher getting as close as possible to the personal lived experience of participants in the post-hospitalization period, by hearing and interpreting the details through an 'iterative and inductive cycle' (Smith et al., 2009)" (p. 1712) "The focus was on the lived experience of participants, understanding their experiences and perspectives to fall prevention activities, and how these experiences impacted their fall prevention behaviour. Thereby we would identify the barriers and enablers to older adults undertaking fall prevention activities within their life-circumstances after hospital discharge." (p. 1712) The data was collected on the phone interviews through a survey of questions to gain an understanding of the perspectives of older adults on fall prevention post arthroplasty.
Measurement and Outcomes	"Data were collected using a semi-structured telephone survey with questions based on a taxonomy from the theory of health behaviour change previously used in studies to measure and describe health behaviour change such as smoking, physical activity and eating behaviours" "Questions were framed around the experiences participants reported regarding barriers and enablers to participant engagement in fall prevention activities using comments and open responses. The semi-structured survey contained open-ended, non-directive questions and was piloted to explicitly consider the topics, to remove potential blind spots, bias and sensitive questions. Each interview was recorded and transcribed verbatim to gain credibility through true participant reflections" (1712)

Results	Description of the sample: Thematic data saturation was reached after detailed analysis of text taken from 30 participants, with con- sideration of group allocation, gender, age and post-discharge incidence of falls. Analysis/theme one: "Participants' perceived physical capability and their knowledge and understanding of how to manage their fall risks were found to strongly influence participant's decision-making towards fall prevention behaviours." (p.1714) Analysis/theme two: "Participants who demonstrated knowledge (psychological capability) of the problem of falls following hospital discharge, such as awareness of the prevalence, expressed an intention to engage in fall prevention activities." (p.1714) Analysis/theme three: "For participants who described an ongoing lack of physical capability after being discharged home from hospital, such as ongoing fatigue or pain, also experienced limited capability to mobilize safely within the home." (p.1714) Analysis/theme four: "Some participants described the experience of facing physical challenges within their lived environment that formed barriers to fall prevention upon returning home after hospital" (p. 1717) Analysis/theme five: "The motivation to prevent falls was described by participants through their willingness to engage in fall prevention activities after discharge home from hospital." (p. 1717)
Authors' Discussion and Conclusion	Idea one: "This study found that absence of opportunities provided by the physical and social environment of older adults after returning home from hospital, could be a barrier to engagement in fall prevention activities." (p. 1718) Idea two: "The post-hospitalization recovery period has been characterizedby older adults prematurely taking risks." (p. 1718) Idea three: "Participants who had opportunity to access physical and social support from health professionals, family members or formal carers after hospital discharge, expressed optimism in managing their fall risks." (p. 1719) Idea four: "More healthcare input may have been required to activate enough integrated support (opportunity in the COM-B model) between healthcare professionals and caregivers, to ensure needs were met." (p. 1719)
Authors' Limitations	Limitations included participant fatigue from recent illnesses, the researcher's positionality as a therapist, and not interviewing caregivers or support systems.

Authors' Implications For Practice and Future Research	"Findings indicate that further healthcare and social support is needed for older adults over the extended recovery period after discharge home from hospital. Recovering older adults face complexities at many levels that influence fall prevention behaviours, including overcoming a recent medical illness and ongoing functional decline. These challenges are less predictable at the time of hospital discharge and therefore more likely to be influenced by integrated care and support once older adults return home from hospital."

	Summary
APA Reference	Johnston, K., Barras, S., & Grimmer-Somers, K. (2010). Relationship between pre-discharge occupational therapy home assessment and prevalence of post-discharge falls. Journal of Evaluation in Clinical Practice, 16(6), 1333–1339. https://doi.org/10.1111/j.1365-2753.2009.01339.x
Abstract	Rationale, aims and objective: Pre-discharge occupational therapy home assessments are common practice, and considered important for falls prevention in older people. This prospective, observational cohort study describes the association between pre-discharge home assessment and falls in the first month post-discharge from a rehabilitation hospital. Methods: 342 inpatients were recruited and followed up 1 month post-discharge. Patients were classified into diagnostic groups (cardiac, orthopaedic trauma, spinal, peripheral joint surgery, neurological and deconditioned). Age, gender, falls risk [Falls Risk Assessment Scoring System (FRASS)], functional independence scores (FIM™) and receipt (or not) of a home assessment were recorded. Patients completed a diary to document post-discharge falls. Logistic regression analysis tested the effect on falling of receiving a home assessment, age, gender, diagnostic group, FRASS and FIM™. Results: Considering all subjects, not receiving a home assessment increased the risk of falling 1 month post-discharge [odds ratio (OR) 2.6, 95% confidence interval (CI) 1.4–4.7, P = 0.003]. Neurological and orthopaedic trauma patients had significantly elevated risks of falling [OR (95% CI), respectively, 12.5 (4.7–33.2), 3.4 (1.4–8.4)] relative to the orthopaedic joint group. For all diagnostic groups except neurological, falls risk was mitigated by a home assessment. In non-neurological patients, adjusting for the effect of diagnostic group, FRASS and FIM™ scores indicated a significant association between not receiving a home assessment and falling (OR 4.2, 95% CI 2.1–8.2, P < 0.001). Conclusions: Pre-discharge occupational therapy home assessments are sound post-discharge falls-prevention strategies in non-neurological patients. The decision to conduct a home assessment should consider diagnosis, falls risk and functional independence.
Your Focused Question and Clinical Bottom Line	Question: Are occupational therapy home assessments pre-discharge beneficial as a fall-prevention intervention? Clinical Bottom Line: Occupational therapy home assessments pre-discharge have been shown to decrease the likelihood of falling for cardiac, orthopaedic trauma, orthopaedic joint surgery, spinal, and deconditioned diagnostic groups one month after discharge from the hospital. Fall risk was not mitigated by a home assessment for the neurological diagnostic group.
Your Lay Summary	Safety is very important when coming back from the hospital. But, falls can be a big problem when a patient comes home from a long hospital

	stay. There might be a solution to this problem. Occupational therapists can give home safety tests to patients before they leave the hospital to find any fall risks. The researchers of this study wanted to see if giving patients a home safety test before leaving the hospital caused less falls at home. They looked at 342 patients. 223 patients got a home safety test and 119 did not get a home safety test before they left the hospital. The researchers found that when occupational therapists give their patients a safety home test, those patients will have less falls at home after getting back from the hospital.
Your Professional Summary	The researchers in this study had the objective of finding the association between pre-discharge home assessments and falls within the first month after discharge from a hospital. They utilized a prospective, observational cohort study method to examine 342 patients from recruitment to completion. Of these, 223 patients received a pre-discharge home assessment and 119 patients did not. The patients were then divided into smaller groups based on their diagnosis: cardiac, orthopaedic trauma, neurological, orthopaedic joint surgery, spinal, and deconditioned. The researchers found that OT home assessments pre-discharge have been shown to decrease the likelihood of falling for the cardiac, orthopaedic trauma, orthopaedic joint surgery, spinal, and deconditioned diagnostic groups one month after discharge from the hospital. The strengths of this study include a large sample size, varying diagnostic groups, and large power. The weaknesses of this study include many exclusion criterias such as poor written and spoken English, significant psychiatric conditions, and being unable to participate in a telephone follow up. These exclusions limit potential findings. In the end, the researchers recognize that more research is required to analyze the impact of home assessments for neurological groups because they did not find significant associations for that group in this study. Additionally, evaluations of condition specific falls programs should be considered. Finally, decision making tools should be created to help assist clinicians in determining when a home assessment may be useful because the clinicians in this research only went by their professional opinion.
	Critical Appraisal
Stated Purpose or Research Question	“Pre-discharge occupational therapy home assessments are common practice, and considered important for falls prevention in older people. This prospective, observational cohort study describes the association between pre-discharge home assessment and falls in the first month post-discharge from a rehabilitation hospital” (p. 1333).
Background Literature	Key points of the intro section:

	"[OT] may contribute to falls prevention by suggesting modifications to the physical environment, and/or facilitating change in the patient's interaction with their environment" (p. 1333). "Comprehensive home assessment by [OT's] has been identified as an effective falls-prevention strategy… Despite this evidence, clinical implementation is unclear" (p. 1333). "It is important to determine whether the provision of a pre-discharge [OT] home assessment is associated with reduced falls events post-discharge in clinical assessments. The first month post-discharge deserves attention as this period has been associated with the most problems" (p. 1334). Theoretical perspective: not given
Research Design	Research design: Prospective, observational cohort study Rationale for the design: Not reported, but the design format helps to meet the purpose of the study by comparing two groups. For quantitative primary research, AOTA Level of Evidence: Level 2, non-randomized, two groups
Sampling	Sampling method used and the rationale (if given).: Invited to participate were patients admitted to a metropolitan rehabilitation hospital between November 2004 and July 2005. These patients were approached using a standard protocol by 1 investigator within 48 hours of their admission. All of the patients provided written informed consent. Inclusion criteria: Inclusion criteria included patients that were admitted to a metropolitan rehabilitation hospital between November 2004 and July 2005. They broke down these patients into broad diagnostic groups: cardiac, orthopaedic trauma, neurological, orthopaedic joint surgery, spinal, or deconditioned. Exclusion criteria: Patients were excluded from the study if they had a Folstein Mini-Mental State Examination score below 24, significant psychiatric conditions, inadequate understanding of written and spoken English, if they were admitted from or had planned discharge to a residential care facility, or they were unable to participate in a telephone follow up. Power/sample size estimate: 80% power, $\alpha = 0.05$, effect size = 0.5
Sample	Number of Participants (Total and Subgroups): 490 patients were approached by the investigator, 87 of these were excluded due to exclusion criteria. There were 342 total participants from recruitment to completion. 223 patients received a pre-discharge home assessment and 119 did not receive a pre-discharge home assessment. The decision of

	providing a home assessment was made by the OT practitioner based on clinical reasoning grounds. Characteristics of the Sample (Gender, Race/Ethnicity, Diagnosis/Disability): In the home assessment group: 147 females, 76 males, with a median age of 78. In the no home assessment group: 82 females, 37 males, with a median age of 77. Dropouts: 61 total participants withdrew from the study: 26 withdrew consent, 13 transferred to acute care, 1 transferred to permanent placement, 5 died, 15 incomplete data, and 1 jailed.
Groups	Types of groups: (e.g., intervention, sample characteristic): There was (1) home assessment group, and (2) no home assessment group. Within each group cardiac, orthopaedic trauma, neurological, orthopaedic joint surgery, spinal, and deconditioned diagnostic groups were created. Home assessment + cardiac: 12 patients (5.4%) Home assessment + orthopaedic trauma: 43 patients (19.3%) Home assessment + neurological: 18 patients (8.1%) Home assessment + orthopedic joint surgery: 103 patients (46.2%) Home assessment + spinal: 16 patients (17.2%) Home assessment + reconditioning: 31 patients (13.9%) No home assessment + cardiac: 14 patients (11.8%) No home assessment + orthopaedic trauma: 15 patients (12.6%) No home assessment + neurological: 9 patients (7.6%) No home assessment + orthopedic joint surgery: 36 patients (30.3%) No home assessment + spinal: 15 patients (12.6%) No home assessment + reconditioning: 30 patients (25.2%)
Method	Primary methods to answer research question: The researchers collected data in two phases: 1. Information was gathered from each participants' medical records (age, sex, diagnostic group, falls risk (Falls Risk Assessment Scoring System/FRASS), functional performance (Functional Independence Measure/FIM), and whether they had received an OT home assessment pre-discharge. 2. After discharge, patients were asked to record any falls in a dairy for one month. "Falls" were classified as an "untoward event which resulted in the patient coming to rest unintentionally on the ground or other lower surface" (p. 1334). Details about the location and injury level of the fall were also recorded. An envelope was provided for the patients to return their diary, and patients were telephoned to obtain data if they had not returned the diary.
Measurement and Outcomes	Measure: The SAS Version 8.2 was used for analysis of the data. There was no mention of the construct measures, reliability or validity

	information, or the frequency with which it was used in the study, making it unclear as to why this measure was utilized.
Results	Description of the sample: There were 342 total participants from recruitment to completion. 223 of the patients received pre-discharge home assessments (147 females, 76 males, median age of 78). 119 of the patients did not receive home assessments (82 F, 37 M, median age of 77). Analysis/theme one: To determine the requirement of a home assessment, the clinical reasoning process of the occupational therapists did not appear to differentiate on age, gender, length of stay, or living arrangements. Instead, those receiving a home assessment had higher FRASS scores and lower FIM scores. Analysis/theme two: There were a total of 50 falls one month after discharge. "Of the patients who received a home assessment, 10.3% (23/223) reported a fall compared with 23.1% (27/119) of patients who did not receive a home assessment" (p. 1335). Therefore, a pre-discharge home assessment was associated with a decreased likelihood of falling. Analysis/theme three: Potential confounding variables were considered in the study. It was identified that diagnosis was associated with falls in three risk levels: high risk (neurological), moderate risk (orthopaedic trauma), and low risk (spinal, deconditioned, cardiac, and orthopaedic joint surgery). Analysis/theme four: There is a significant association between not receiving a home assessment and falling except for the neurological group. In the neurological group, post-discharge fall risk was not mitigated by a home assessment.
Authors' Discussion and Conclusion	Idea one: "Not conducting a pre-discharge home assessment was associated with nearly three times the risk of falling in the month after discharge" (p. 1336). Idea two: "The magnitude of increased risk ranged from 3.9 times higher for cardiac, spinal, and deconditioned patients to 8 times more likely to fall for orthopaedic trauma patients who did not receive a home assessment" (p. 1336). Idea three: "Neurological patients in this study receiving a home assessment did not significantly influence their high risk of post-discharge falls" (p. 1336).
Authors' Limitations	There were no limitations listed in the research study, but I have come up with my own limitations:

	Patients with significant psychiatric conditions, an inadequate understanding of written and spoken English, or unable to participate in a telephone follow up creates a lot of exclusion criteria for patients that could have participated in the study.
Authors' Implications For Practice and Future Research	The total number of neurological patients was small, meaning that more research is required to analyze the nature and impact of a home assessment for this group. Evaluations of condition-specific falls-prevention programs should be considered. The decision to conduct a home assessment was made by the professional opinion of individual clinicians with no formal criteria or guideline. The strong confounding factors identified in this research could inform a decision making tool to assist clinicians in determining when a home assessment may be useful.

	Summary
APA Reference	Petersson, I., Lilja, M., & Borell, L. (2012). To feel safe in everyday life at home – a study of older adults after home modifications. Ageing and Society, 32(5), 791–811. https://doi.org/10.1017/S0144686X11000614
Abstract	"The aim of this study was to explore aspects contributing to experiences of safety in everyday life for older adults who have received modification services. Qualitative interviews were conducted with eight people. Data were analysed using a comparative approach. Three main categories emanated in the analysis: prerequisites that enable a feeling of safety, strategies that enable safety in everyday life, and use of and reliance on technology impacts on safety. The findings revealed that to feel safe in everyday life was based on three prerequisites: feeling healthy, having someone to rely on and feeling at home. The fulfilment of these prerequisites further impacted on the participants' strategies for handling problems in everyday life but also on the ability to use and benefit from technology such as home modifications. In conclusion, the findings indicated that interventions provided to increase safety for older adults should primarily be focused on the presence and fulfilment of prerequisites and later on other interventions such as technology. Technology such as home modifications and assistive devices was not found in this study to facilitate the feeling of safety unless supported by the fulfilled prerequisites. Implications of these findings for clinical practice are discussed" (p. 791).
Your Focused Question and Clinical Bottom Line	Question: How can the prerequisites of feeling healthy, having someone to rely on, and feeling at home be increased to help with home safety and fall prevention? Clinical Bottom Line: The interventions provided by healthcare professionals must meet the needs of someone with joint replacement and should fulfill the three prerequisites, in order to prevent falls and increase home safety.

Your Lay Summary	This paper looked at what made older adults feel safe. Interviews were done with eight people whose surroundings were changed to help them. The stories that were told were compared. Three topics were found which were things that bring a feeling of safety, tools that create safety every day, and using devices to feel safe. From these topics, the things that help older adults are feeling healthy, having someone there for them, and making yourself at home were seen as needed for older adults. Having these needed things change how older adults fix challenges and use devices in their homes. To help in the future, healthcare workers should help with patients' needs and later work on adding devices to the appointments. Healthcare workers must think about the patients' life and culture and the needed things must be touched on to help care for and make patients' homes and surroundings safe.
Your Professional Summary	This article looked at what requirements were needed for older adult participants to feel safe every day who were given home modifications. The design of this study that the researchers conducted was qualitative. The sample size of the study was eight participants. The strengths of this paper include the in-depth explanations and interviews about the technology and other areas that contributed to the participant's safety every day. The participants also had diverse backgrounds and experiences, so their gender, housing type, and the home modification they received were vastly different and may have impacted if they felt safe or not. The weaknesses in this study were the small sample size of eight people whose homes were modified. Additionally, technology may have had a more significant impact on the participants feeling safe because all of the participants had home modifications. Lastly, the participants were recruited and interviewed until nothing new came up in their explanations of their past safety experience, limiting the number of participants. The implications for this study are that for care and assistive devices to be helpful, the prerequisites of feeling healthy, having someone there for you, and having a sense of home must be met first, which will be crucial to consider in practice when working with similar patients.
	Critical Appraisal
Stated Purpose or Research Question	"In the research project as well as in this present study the concept of safety is viewed as the individuals' own self-perceived experiences of safety in everyday life. The experiences of safety are therefore discussed in relation to how they perceived their safety in different everyday life activities such as transferring outside the home or showering, and aspects contributing to their experiences of safety in these situations" (p. 793).

Background Literature	Key points of the intro section: "The aim of this study was to explore aspects contributing to experiences of safety in everyday life among a sample of older adults who have received home modification services" (p. 791). "Research has shown that the home is regarded as a central, meaningful and important place for older adults" (p. 792). "Feeling unsafe in the home and in the performance of everyday life activities has been identified as a large threat to ageing in place and also a reason for moving to sheltered housing" (p.792). "There is… a great lack of scientifically based knowledge of how challenges to safety at home can be understood and how safety can be facilitated" (p. 792). "Research has shown that various technologies such as home modifications and assistive devices can help to increase safety in everyday life" (p.792). Theoretical perspective: Not reported
Research Design	Research design: Qualitative Rationale for the design: Not reported
Sampling	Sampling method used and the rationale (if given). From another study that this study referred to "Participants were recruited from a local Agency for Home Modification in a large city in Sweden during the period 2002-04.Recruitment was conducted through collaboration between the researchers and the professionals (i.e. occupational therapists and physiotherapists) working at the AHM" (Petersson et al., 2008). For this study "the first author contacted potential participants with an information letter. The letter was followed by a telephone contact obtaining verbal consent for participation and booking the interview" (p. 794). Inclusion criteria: Same criteria as the previous study "(a) have ended their participation in the longitudinal research project, (b) have received their applied home modification, (c) be over the age of , and (d) have reported lack of safety in any of the activities in the Client-Clinician Assessment Protocol (C-CAP) Part I instrument (Lilja ; Petersson et al.), in at least one out of the three data collections in the longitudinal research Project" (p.793). Exclusion criteria: None stated Power/sample size estimate: Not reported

Sample	Number of Participants (Total and Subgroups): 8 participants Characteristics of the Sample (Gender, Race/Ethnicity, Diagnosis/Disability): "Sofia (F)-high blood pressure, arthritis, reduced vision and hearing, stomach problem, breathing problem, muscle disease, Erik (M)-Cardiovascular disease, breathing problems, Valter (M)-Cardiovascular disease, Harriet (F)-Cardiovascular disease, reduced vision and hearing, breathing problems, cancer, Astrid (F)-High blood pressure, cardiovascular disease, stroke, reduced vision, lung disease, stomach problems. Depression, Olga (F), cardiovascular disease, arthritis, lung disease, reduced vision. Diabetes, George (M)- double amputee, diabetes, lung disease, Samual (M)-cardiovascular disease, high blood pressure, stroke, arthritis, lung disease, reduced vision, stomach problems, cancer." (p. 796-797). Race/ Ethnicity was not recorded Dropouts: Not recorded
Groups	Types of groups: To show variation "Participants' demographics, differences were sought in age, gender, housing, and social situation, urban and rural areas, as well as in home modification received" (p. 794). Participants were included individually to increase the data and make sure the study was able to be replicated. Group one description: "Sofia (F)-82 years old, Living status: Alone, Housing: Rented apartment suburb, Home modification: replace bathtub with shower, automatic door opener, Health problems:high blood pressure, arthritis, reduced vision and hearing, stomach problem, breathing problem, muscle disease, Self rated problems and safety in everyday life: reports great difficulties in activities including mobility, especially outdoor activities. Reports unsafety in dressing, self-care, showering, and taking medication. Group two: Erik (M)-66 years old, Living status: partner, Housing: owned apartment suburb, Home modification: stair lift, Health problems: Cardiovascular disease, breathing problems, self-rated problems in everyday life: reports difficulties in all transfers both indoors and outdoors. Reports unsafety in walking outside the home. Group three: Valter (M)- 72 years old, living status: partner, housing: rented apartment, suburb, Home modificationL replace bathtub with shower, Health problem: Cardiovascular disease. Self-rated problems and safety in everyday life: reports difficulties in all transfers, both indoors and outdoors. Reports unsafety with transfers at home and on stairs. Group four: Harriet (F)- 81 years old, living status: alone, housing: owned apartment, suburban. Home modification: stair lift, health problems:

	Cardiovascular disease, reduced vision and hearing, breathing problems, cancer. Self-rated problems and safety in everyday life: reports great difficulties in activities including mobility especially outdoor and alsi dressing lower body. Reports unsafety in transfers at home, on stairs and outside the home. Group five: Astrid (F)- 82 years old, living status: partner, housing: rented apartment, suburb, home modification: automatic door opener. Ramp, Health problems: High blood pressure, cardiovascular disease, stroke, reduced vision, lung disease, stomach problems. Depression. Self-rated problems and safety in everyday life: reports great difficulties in activities including mobility, especially outdoor activities and also dressing lower body and showering. Reports unsafety when showering and on stairs. Group six: Olga (F), age 72, living status: alone, housing: owned apartment, city, home modification: stair lift, automatic door opener, ramp. Health problems: cardiovascular disease, arthritis, lung disease, reduced vision, Diabetes. Self- reported problems and safety in everyday life: reports great difficulties in activities including mobility, especially outdoor activities and instrumental activities and also dressing lower body and showering. Reports unsafety when showering and in transfers at home, on stairs and outside the home. Group seven: George (M)- 72 years old, Living status: alone, housing: rented apartment, suburb. Home modification: stair lift. Health problems: double amputee, diabetes, lung disease. Self-rated problems and safety in everyday life: reports difficulties with mobility on stairs and getting into a car. Reports unsafety in getting in and out of the home. Group eight: Samual (M)- age 73, living status: partner, housing: rented apartment, city, home modification: replace bathtub with shower, health problems: cardiovascular disease, high blood pressure, stroke, arthritis, lung disease, reduced vision, stomach problems, cancer. Self-rated problems and safety in everyday life: reports difficulties with dressing and transfers, especially on stairs and getting into a car. Reports unsafety with dressing and showering"(p. 796-797). Race/ Ethnicity was not recorded

Method	Primary methods to answer research question: "The guide included questions related to everyday life such as: 'Can you tell me about an event or task where you felt safe?', 'Why did you choose this situation?', 'Could you describe something that makes you feel safe?' Probe questions were used in combination with the open-ended narrative questions in order for the participant to describe the activities or situations in more detail, for instance 'Can you tell me more?' After the first interview the data were read and discussed by the authors. This discussion indicated further directions by: (a) providing a foundation for the follow-up interview and (b) guiding the inclusion of additional participants in order to enrich the data. The guiding principle was to search for as many differences in characteristics as possible(Glaser and Strauss). In the second interview, conducted about two weeks after the first interview, an individual interview guide based on the first data collection was applied. In this interview the researcher invited the participant to further develop and describe aspects that emanated from the first data collection or to reflect on new aspects related to safety" (p. 794).
Measurement and Outcomes	Measure: "The data were analysed using a comparative approach (Glaser and Strauss). A comparative approach is characterised by making comparisons at each level of the analytic work. The purpose of going back and forth in the data is to find similarities and differences in the data. In the first phase, all interviews were read very closely until the authors felt they had a good grasp of the data and were oriented in it. In the second phase each participant's data were coded. This analysis started with a line-by-line coding (Strauss and Corbin) of sequences that were of interest for this study. The aim of the study guided the coding process. Data that were not included in this analysis were related to other topics such as data on family members' interests. During the line-by-line coding the data were labelled with active codes close to the participant's own wording, i.e. an attempt was made to describe what was going on and what this meant for the participant from an inside perspective. After coding all participants' data, the codes and contents were compared and similar codes were brought together. In the third phase of coding the most significant codes from all participants were identified through a constant comparison of the initial codes and the data. Codes were compared on the basis of similarity and were explored and developed into categories. Each category represented a set of codes with a related context. This step included moving back and forth, constantly comparing and re-examining data within and across categories. This verification was done to make sure that the results remained close to the participants' experiences and to make sure that there were no data overlaps. In the next phase each category was carefully examined and sub-categories identified. Three categories and sub-categories contributing to experiences of safety in everyday life were identified." (p. 795-798).

	Measure: Finally, as a last step in the analysis the categories were interpreted by applying an approach from the hermeneutic tradition (Gustavsson). The hermeneutic approach was applied to learn about possible interpretations related to the structure and relationship of the categories and their impact on safety in everyday life for older adults. During the data collection and analysis process, as described above, the three authors held continuous discussions related to the quality of the data and different coding and interpretation possibilities. By continuously moving back and forth between the data and the emerging categories and interpretations the authors made sure that the findings were grounded in the data (Kvale). In order to investigate the validity of the interpretations of the structure and relationship of aspects influencing safety, a criterion by Gustavsson was used. In analysing the data, several possible interpretations were formulated and applied as possible explanations related to the findings. The criteria stated that the interpretation of the structure and the relationship between the aspects influencing safety which was finally chosen had to provide the most fruitful explanation (Gustavsson). This meant that the interpretations were continuously checked and revised according to the search for the most gainful explanation." (p. 795-798). Publishers were unable to be located, so I was unable to find the exact reliability and validity of these measures. However, data was collected at different points, there were two or more coders, and they performed a code-recode procedure. Which helps to build its trustworthiness.
Results	Description of the sample: "Sofia (F)-high blood pressure, arthritis, reduced vision and hearing, stomach problem, breathing problem, muscle disease, Erik (M)-Cardiovascular disease, breathing problems, Valter (M)-Cardiovascular disease, Harriet (F)-Cardiovascular disease, reduced vision and hearing, breathing problems, cancer, Astrid (F)-High blood pressure, cardiovascular disease, stroke, reduced vision, lung disease, stomach problems. Depression, Olga (F), cardiovascular disease, arthritis, lung disease, reduced vision. Diabetes, George (M)- double amputee, diabetes, lung disease, Samual (M)-cardiovascular disease, high blood pressure, stroke, arthritis, lung disease, reduced vision, stomach problems, cancer" (p. 796-797). Analysis/theme one: "The findings in this study describe aspects contributing to experiences of safety in everyday life for older adults receiving home modification services. The analysis identified three categories with sub-categories, all related to each other and all impacting on safety" (p. 798)

	Analysis/theme two: Prerequisites of feeling healthy, having someone to rely on, and feeling at home affected the experience of safety. These will be further explained Analysis/theme three: Feeling healthy allowed participants to feel that they could handle situations and participate in daily activities. Analysis/theme four: Having someone to support them and someone they could trust helped the participants to feel safe Analysis/theme five: Being able to feel at home was correlated with feeling safe. Analysis/theme six: Being able to have power over their home and they lived in their home helped the participants feel safe. Analysis/theme seven: Having environments that were familiar, being able to go outdoors, and be free from stress in these environments increased feelings of safety. Analysis/theme eight: participants who had these three prerequisites were able to adapt to new situations and activities to stay active, participants without these prerequisites found this to be harder. Analysis/theme nine: Some participants would limit activities and not perform dangerous tasks, but that would keep some participants from activities they enjoyed. Analysis/theme ten: Some participants continued to do the activities they were doing before they experienced decreased abilities and were reluctant to try assistive devices. Analysis/theme eleven: Some participants who had the prerequisites, chose to adapt to their new challenges so they could continue their activities and to feel safe. Analysis/theme twelve: All participants stated that technology could help and they all received some form of home modification. Analysis/theme thirteen: The prerequisites were needed as well as the technology in order for safety to be felt. Analysis/theme fourteen: Trusting technology helped participants to perform activities and impacted safety.

	Analysis/theme fifteen: Technology helped increase independence and autonomy. It allowed participants to feel that they could do some activities again because they felt safe. Analysis/theme sixteen: The three prerequisites helped the participants to have a sense of safety. These will be key to understand when creating intervention plans for aging in place older adults. (p.798-806)
Authors' Discussion and Conclusion	Idea one: "The focus in this study is on aspects contributing to safety in everyday life for older adults who have received home modifications" (p. 806) Idea two: "Technology, social support, and the neighborhood impact on older adults' perceptions of safety" (p. 807). Idea three: "These findings have shown that to feel safe in everyday life was founded on three aspects identified as prerequisites: feeling healthy, having someone to rely on and feeling at home" (p. 807). Idea four: "To feel safe at home is of importance in order to facilitate aging in place" (p. 807) Idea five: "The social environment (someone to rely on) has been found to have a large impact not only on older people's safety but also on their participation, satisfaction, and health" (p. 807) Idea six: "participant's experience of safety in everyday life included situations that were considered autonomous and without difficulties" (p. 808). Idea seven: "The findings identified that contributions to older people' safety in everyday life are related to at least three important aspects; prerequisites that make safety possible, strategies towards handling problems in everyday life and reliance on technology" (p. 809). Idea eight " The study showed that different services such as home help services, home modifications and assistive devices need to be related to the older adults' situations, strategies for handling problems, as well as the individuals' values and needs, since the services alone will not be able to facilitate experiencing a safe everyday life" (p. 809). Idea nine "interventions' emphasis should focus on fulfilling the prerequisites, in order for other services such as care and technology to have any impact" (p. 809).

Authors' Limitations	"This study has methodological considerations specifically related to the samples that need to be addressed. First, the participants in this study consisted of a limited sample of eight people receiving home modifications. Participants were recruited for this study one at a time until saturation was met. This means that the recruitment was ended when nothing new emerged in the participants' experiences of their safety, resulting in a final sample of eight persons. Second, the participants consisted of older people who had received home modifications, and the experience of technology could therefore have been central for the participants. Third, this study sought a variation in the participants' demographic aspects of gender, housing, and type of home modification as these might have impacted on the participants' experiences of safety. In the analysis it was revealed that living arrangement and type of housing were related to the experience of safety as previously presented, although the findings were not found to be related to either gender or type of home modification." (p. 808-809)
Authors' Implications For Practice and Future Research	"It is therefore of importance that future research on older adults functioning at home also considers the individuals' perceptions such as sense of autonomy, personal control or readiness to make changes….It would therefore be interesting to investigate this further in a sample that has not received home modification services…. The findings in this study have important implications for professionals working with older adults, not just in Sweden but in all cultures that emphasize ageing in place. The study showed that different services such as home help services, home modifications and assistive devices need to be related to the older adults' situations, strategies for handling problems, as well as the individuals' values and needs, since the services alone will not be able to facilitate experiencing a safe everyday life. Therefore, to facilitate a safe everyday life for older adults more of the interventions' emphasis should focus on fulfilling the prerequisites, in order for other services such as care and technology to have any impact." (p. 807-809).

	Summary
APA Reference	Shuman, C. J., Montie, M., Hoffman, G. J., Powers, K. E., Doettl, S., Anderson, C. A., & Titler, M. G. (2019). Older adults' perceptions of their fall risk and prevention strategies after transitioning from hospital to home. *Journal of Gerontological Nursing, 45*(1), 23-30. https://doi.org/10.3928/00989134-20190102-04
Abstract	"Falls are common adverse events following hospital discharge. However, prevention programs are not tailored for older patients transitioning home. To inform development of transitional fall prevention programs, nine older adults designated as being at risk of falls during hospitalization who were recently discharged home were asked about their perceptions of fall risk and prevention, as well as their knowledge and opinion of materials from the Centers for Disease Control and Prevention Stopping Elderly Accidents, Deaths & Injuries Initiative. Using the constant comparative method, five themes were identified: Sedentary Behaviors and Limited Functioning; Prioritization of Social Involvement; Low Perceived Fall Risk and Attribution of Risk to External Factors; Avoidance and Caution as Fall Prevention; and Limited Falls Prevention Information During Transition from Hospital to Home. Limited awareness of and engagement in effective fall prevention may heighten recently discharged older adults' risks for falls. Prevention programs tailored to the post-discharge period may engage patients in fall prevention, promote well-being and independence, and link hospital and community efforts" (p.23).
Your Focused Question and Clinical Bottom Line	EBP Question: What are the current interventions for fall prevention and home safety for older adults after joint replacement in a sub-acute setting? Question: After discharge from the hospital, how do older adults perceive their risk of falling in their homes or community? Clinical Bottom Line: In order to reduce the rates of falls in older adults 65 and older, it is critical that patients receive fall prevention education prior to their discharge from hospitals and sub-acute settings.

Your Lay Summary	This study looked at how older adults felt about their chance for falling after being in a hospital. This study also looked at if older adults received any fall prevention education while they were in the hospital. The researchers completed a one-hour interview with older adults who were at least 65 years old. The researchers showed the older adults three handouts on fall prevention that included a checklist for safety around the home, and tips for preventing falls. The researchers then asked the older adults if they had seen these handouts before and this information was helpful. The results of this study showed that there was not enough fall prevention education and it is important to take into account the perspectives of older adults and their perceived risks for falls.
Your Professional Summary	This study was a Qualitative Descriptive Research Study that included participants 65 and older recruited from medical-surgical floors in a Michigan community hospital. Through a one-on-one interview, the researchers first wanted to identify perspectives from older adults on their perceived risks off falling and what safety hazards around their homes could increase their risk. Researchers also wanted to determine if and when healthcare professionals used fall prevention educational materials prior to discharge. Finally, at the end of the interview, researchers introduced the participants to three Fall Prevention brochures from the Center for Disease Control and Prevention (CDC) and measured the usefulness of the brochures based on the participants opinions. The results of this study indicate that despite several evidence-based resources on fall prevention, there is a lack of use of these resources upon discharge from the hospital to educate patients. These findings also indicate the importance of client-centered care by considering the impact of individualized perspectives that patients may have around their risks of falls. Two limitations of this study were the sample size and the lack of diversity amongst the participants. The sample size of this study was small with only nine individuals completing the interview and all nine participants were Caucasian. When conducting further research, it may be beneficial to use multiple hospital sites to obtain a sample that is more diversified.
	Critical Appraisal
Stated Purpose or Research Question	“The aims of the current study were to describe recently hospitalized older adults’ perceptions about: (a) their overall risk for falls, factors contributing to fall risk, and actions they can take to prevent falls at home; (b) information they received at discharge to prevent falls at home; and (c) their awareness and perceptions regarding the usefulness of three CDC STEADI older adult fall prevention brochures (Check for Safety, Stay Independent, and What You Can Do to Prevent Falls)” (p. 24).

Background Literature	Key Points of the Intro Section: "Falls are among the most frequently occurring adverse events for older adults in the post-discharge period" (p. 23). Hospitals tend to focus on fall prevention education in the context of the hospital setting, with no real focus on fall prevention during transition periods. There are existing evidence-based fall prevention education materials through the CDC, including the STEADI initiative. "Little is known regarding patient awareness and perceived usefulness of these and other hospital-provided materials to prevent falls after transitioning from hospital to home" (p.24). Connecting community resources with the educational efforts in the hospital may help patients to participate in fall prevention programs. Theoretical Perspectives: Not reported
Research Design	Research design*:* Primary Research Study (qualitative descriptive research design) Rationale for the design: Rationale behind using a qualitative descriptive study was not stated by the authors. AOTA Level of Evidence*:* Not applicable
Sampling	Sampling method used and the rationale: Participants were recruited from the medical-surgical floors in a Michigan community medical center. "A nurse manager identified eligible patients in the hospital and assessed their interest in study participation. Patients who indicated interest were referred to the primary author, who visited with each patient prior to discharge, administered the CAM to rule out delirium, validated inclusion criteria, explained the study in detail, and obtained written formal consent" (p. 24). Inclusion criteria: $\geq$ 65 years old Identified as moderate to high fall risk for falls during hospitalization (Score of $\geq$ 25 on the Morse Fall Scale) Discharged home English speaking Able to participate in an interview within four weeks of discharge Exclusion criteria: Documented history of dementia in medical records Deemed confused or delirious based on the Confusion Assessment Method (CAM) screening tool Power/sample size estimate: Not reported

Sample	Number of Participants (Total and Subgroups): N=9 40 participants were screened Reasons for not participating: not interested in study (15), not available (4), going to rehab facility (3), no reason given (2) 16 participants were enrolled (N=16) Interviewed N=9 Withdrawals: Too ill (4), Scheduling conflict (1), lost to follow up (2) Characteristics of the Sample (Gender, Race/Ethnicity, Diagnosis/Disability): (p.26) All participants were Caucasian Mean age: 77 years Gender: 6 Females, 3 Males Marital status: 8 married, 1 single Type of home: house (8), condominium (1) Primary Medical Diagnosis: Pneumonia (2), Hypoxic Respiratory failure (2), Choledocholithiasis (1), Generalized Weakness (1), Upper Gastrointestinal bleed (1), Dyspnea (1), Cerebrovascular Incident (1)
Groups	Because this was a Qualitative Descriptive Research Study, no groups were assigned.
Method	Primary methods to answer research question: "Data was collected January through June 2017 via face-to-face interviews (lasting 45 to 60 minutes) conducted by the primary author using a semi-structured interview guide" (p. 25) "Interviews began with questions about participants' usual activities and from there moved to a discussion about fall risk and fall prevention during the post-discharge period" (p.25) "At the end of the interview, participants were shown three no-cost brochures from the STEADI Initiative of the CDC" (p.25)
Measurement and Outcomes	"The interview guide was reviewed and critiqued by two external nurse scientists and pre-tested with volunteers for completeness, accuracy, and flow" (p.25). Two members of the research team transcribed the audio recordings of the interviews. The transcriptions were then read twice to check for accuracy. Four investigators performed initial coding individually to identify minor themes. Minor and major themes were discussed and compared amongst the investigators to come up with a consensus of five major themes. "The study team took deliberate steps to ensure rigor in study design and establish trustworthiness. Trustworthiness was established through credibility (peer debriefing, member checking during interviews, and prolonged engagement); dependability (inquiry audit); and confirmability (reflexivity)" (p.25).

Results	Description of the sample: Nine Caucasian participants participated in the interview after providing consent and enrolling in the study (p.25) Theme one: Sedentary Behaviors and Limited Functioning "When asked about their usual activities, many participants perceived themselves to be relatively sedentary, reporting spending much of their day sitting on a couch or chair while watching television and/ or playing games on personal electronic devices (e.g., tablet, iPad®, mobile telephone)" (p.25). "Participants described limited functioning by reporting numerous self-care and other activities in which they require assistance from others" (p.25). Theme two: Prioritization of Social Involvement "Participants reported prioritizing engagement in numerous social and community activities, including vocational work, traveling for pleasure, going to the movies, eating at restaurants, shopping, playing card games with friends, and volunteering: (p.26). "When describing these social activities, participants reported various limitations (e.g., limited physical functioning) contributing to sedentary behaviors or requiring them to rely heavily on caregivers" (p.26). Theme three*:* Low Perceived Fall Risk and Attribution of Risk to External Factors "Participants were asked whether they perceived themselves as having low, moderate, or high risk for falls. Although nursing staff identified all participants as having moderate-to high risk for falls during hospitalization, most participants perceived themselves to be at low risk for falling at home and in the community" (p. 26). Theme four: Avoidance and Caution as Fall Prevention "Participants reported using avoidance and caution as first-line fall prevention strategies. Having something nearby to hold onto or grab in case of a fall was reported by participants as important for avoiding and preventing falls" (p. 27). "Participants stated that they avoided situations and obstacles that may contribute to a fall" (p.27). Theme five: Limited Fall Prevention Information During Transition from Hospital to Home "Participants were asked about information provided to them at discharge regarding falls and fall prevention. Some participants reported in-hospital fall prevention activities, including bracelets given to patients at risk for falls and nursing staff support with ambulation, transfer, and toileting for at-risk patients" (p. 27). "When asked about the day of discharge, none of the participants recalled receiving written or verbal general information regarding falls or their own personal fall risk" (p. 28).

Authors' Discussion and Conclusion	Idea one*:* "Participants in the current study did not recall receipt of any education (verbal or written) regarding falls at discharge: (p. 28). Idea two: "Despite the widespread availability of evidence-based patient and provider resources to prevent falls, these resources are not being routinely used to engage and educate older adults in fall prevention" (p.28). Idea three: "Lack of patient engagement in fall prevention is further demonstrated by participants' self-perceived low risk level, attribution of their risk to external factors (depersonalization of risk), and self-described prevention efforts, including avoidant and cautious behaviors" (p.28). Idea Four: "More work is needed to engage patients in fall prevention after hospitalization while also linking them to existing community fall prevention programs. Existing fall prevention programs are siloed by setting (e.g., hospital, long-term care, community), resulting in missed opportunities for intervention referral and bringing fall prevention efforts to scale" (p.28).
Authors' Limitations	The first limitation of this study is that all participants were recruited from the same hospital setting. Another limitation of this study was that all the participants were Caucasian. "Future work using multiple sites and a maximum variation sampling technique would be useful to obtain a more diverse sample" (p. 29).
Authors' Implications For Practice and Future Research	"Based on the results of the current study, researchers assert that future development and testing of fall prevention interventions should address fall prevention delivery gaps and consider older adults' perceptions regarding their fall risk and falls, including their sedentary behaviors, desire for social interaction, low risk perception, misguided prevention efforts, and lack of engagement and activation in prevention efforts" (p. 29).

Review of Research

	Summary
APA Reference	Liu, Y., Yang, Y., Liu, H., Wu, W., Wu, X., & Wang, T. (2020). A systematic review and meta-analysis of fall incidence and risk factors in elderly patients after total joint arthroplasty. *Medicine*, *99*(50), 1-13. https://doi.org/10.1097/MD.0000000000023664
Abstract	"Background: Falls in the elderly have become a serious social problem worldwide. Approximately a third of persons fall at least once in the year after total joint arthroplasty (TJA) but preventing and treating falls is still challenging in clinical practice. Until now, no formal systematic review or meta-analysis was performed to summarize the risk factors of falls after TJA. The present study aimed to quantitatively and comprehensively conclude the risk factors of falls after TJA in elderly patients. Methods: The electronic databases to be searched include CNKI, Embase, Medline, and Cochrane central database (all up to November 2018). All studies on the risk factors of falls after TJA in elderly patients without language restriction were reviewed. Process of evaluation of identified studies and extraction of data were independently conducted by 2 reviewers, qualities of included studies were assessed using the Newcastle–Ottawa Scale. Data were pooled and a meta-analysis completed. All analyses were performed by the software Stata 11.0. Results: A total of 14 studies were included, which altogether included 1284456 patients with TJA, of them 12879 cases of falls occurred after surgery, suggesting the accumulated incidence of 13.1% and the prevalence of in-hospital falls was 1.0%. This study has provided evidence for the prevention of falls in the elderly patients who were underwent TJA. Outcome measures include advanced age, female, Overweight (BMI≥25 kg/m2), falls history, use of walking aid, diabetes, cardiac disease, hypertension, COPD and depressive symptoms. The ABC Scale was significantly negatively correlated with falls after lower extremity joint replacement. Conclusions: Related prophylaxis strategies should be implemented in elderly patients involved with above-mentioned risk factors to prevent falls after TJA" (p. 1).
Your Focused Question and Clinical Bottom Line	Question: What factors increase the risk of fall occurrence in elderly patients recently following total joint arthroplasty? Clinical Bottom Line: Several key factors increase the risk of falls in elderly patients following total joint arthroplasty (TJA), as they compound on the muscle loss and impaired balance following the operation. Occupational therapists can identify these risk factors in patients to deem them at-risk and provide targeted interventions pre- and post-surgery. Female patients are more likely than male patients to experience falls as a

	result of lower bone mineral density and postmenopausal physiological characteristics. Obesity is also associated with increased risk of falls following TJA due to increased mechanical load and joint stiffness. Because previous fall occurrences may cause an older adult to diminish their activity and mobility, older adults with fall history are more prone to falls, especially after TJA. Comorbidities are also common in older adults following lower limb arthroplasties. Chronic diseases such as hypertension, diabetes, COPD, cardiac disease, and depression are associated with balance impairment, reduced muscle strength and power, reflex inhibition, joint instability, and reduced attention.
Your Lay Summary	The researchers who wrote this study combined the findings of 14 research studies that look at factors that lead to a greater chance of falling in elderly patients who have had a joint replacement surgery. Two of the researchers in the study scanned over 400 articles and selected 14 that included risk factors for falling, patients over the age of 60 years, and reliable outcome measures. The researchers pooled participants from all 14 studies and found that 13.1% of patients who had joint replacement surgery fell afterward. The studies agreed that certain factors increase patients' chance of falling after surgery. These include being female, being older, obesity, falling in the past, or having another disease. Knowing these risk factors is important for healthcare providers so they can identify patients who are more at-risk of falling and should be given specific attention before or after their joint replacement surgery.
Your Professional Summary	In their meta-analysis, Liu et al. (2020) combined results from 14 research studies that address fall incidence and risk factors that lead to falls in elderly patients following total joint arthroplasty (TJA). Two researchers scanned and analyzed over 400 studies utilizing a systematic review process and selected the articles utilized for review according to inclusion criteria of lower extremity TJA patients, patients over 60 years, cases of fallers and controls of non-fallers, specified definition of fall, and use of odds ratio and standardized mean difference to calculate results. After employing statistical meta-analysis measures, researchers combined results from all 14 study samples, yielding an incidence of 13.1% of TJA patients who fell after their operation. Common themes among the selected studies indicated key risk factors for patient falls following surgery. These considerations include sex, age, obesity, history of falls, and comorbidities of chronic disease. Because these risk factors are well-determined as statistically significant, it is important for healthcare professionals to identify them in TJA patients and provide specific preventative interventions to address them either before or immediately following their joint replacement surgery.
	Critical Appraisal

Stated Purpose or Research Question	"… in this study, we summarized these risk factors from the previous original research and conducted a meta-analysis that will be most informative in guiding clinicians for identifying high risk patients and help clinicians to prevent postoperative falls and improve the prognosis of patients" (p. 2).
Background Literature	Key points of the intro section that justify need for the study: "Osteoarthritis is a common debilitating chronic condition affecting the elderly population" (p. 1). "Falls in the elderly have become a serious social problem" (p. 1). "…lower limb OA is also a major risk factor for falls with up to 50% reporting falling each year" (p. 1). "Approximately a third of persons fall at least once in the year after TKA or THA" (p. 1). "A preoperative history of falls, depressive symptoms, and THA vs TKA are associated with an increased risk of postoperative falls in aged patients undergoing lower extremity joint replacement" (p. 1). "…these existing studies have generally been too small to investigate multivariate analyses of predictive factors associated with falls" (p. 2). Theoretical perspective: Not reported
Research Design	Research design: Systematic review and meta-analysis Rationale for the design: "Until now, no formal systematic review or meta-analysis was performed to summarize the risk factors of falls in the elderly after lower extremity joint replacement" (p. 2). While researchers note that falls among older adults are a "serious social problem" (p. 1), they do not articulate why their study was necessary exactly at the point in time in which they conducted it. AOTA Level of Evidence: Level IA: systematic review of RCTs with meta-analysis

Method	Primary methods to answer research question: Researchers utilized a systematic review process to select the articles used in the review and statistical analyses to pool the results of each study in the meta-analysis. Variables: First author's name, publication year, country, significant risk factors, definitions and numbers of cases and controls and numbers of citations for each potential risk factor for falling after lower extremity joint replacement surgery Keywords: "factor" or "predictor" or "risk" AND "falls" AND "knee arthroplasty" or "hip arthroplasty" or "knee replacement" or "hip replacement" AND "elderly" Databases: CNKI, Embase, Medline, and Cochrane Procedures: Systematic review: Two reviewers independently evaluated titles and abstracts of the identified studies. They screened the titles and abstracts for duplicated studies and studies that addressed the outcomes of interest. Of the selected articles, reviewers applied the Newcastle-Ottawa Scale (NOS), a quality measure that assigns scores to each article according to selection of study groups, comparability of the groups, and determination of exposure or outcome. Meta-analysis: Reviewers analyzed data in the selected studies using a variety of statistical tests. Researchers used the software Strata 11.0 to perform all statistical measures. Odds ratios and standardized mean differences between all studies were pooled, and Q-tests were performed to test heterogeneity among studies. Random-effect models and fixed-effect models were used to calculate odds ratios in instances of heterogeneity and no heterogeneity, respectively.

Filters	Research Designs included and not included: This meta-analysis included primary research studies that addressed outcomes in cases of fallers and controls of non-fallers. Inclusion and exclusion criteria: Inclusion: Articles were included for in the meta-analysis if they were full-text, published in English, addressed risk factors for falling in patients following lower extremity TJA, included a sample of participants over the age of 60, classified cases as fallers and controls as non-fallers, defined a fall as unintentionally coming to the ground, and yielded sufficient data based on odds ratio or standardized mean difference with 95% confidence interval. Exclusion: Researchers excluded articles that were not available in full-text and or had language restriction from the meta-analysis. Total references found: 14 articles included in meta-analysis Process for eliminating references: Using keywords, 448 titles and abstracts were yielded. After initial yield of 448 titles, 342 abstracts, case reports, reviews, editorials, or repetitive studies were identified by screening titles and excluded. 106 remaining abstracts were reviewed, and 75 duplicate articles were removed. Next, 31 articles underwent full-text review. Of these, five were eliminated for providing insufficient data, one was eliminated due to language restriction, and 11 were excluded because they did not report on outcomes of interest. 14 articles remained to include in the meta-analysis.
Results	Description of the articles: Researchers included 14 articles in the final review. The quality assessment of 7 studies scored 8 out of 9 points on the NOS scale, 5 studies scored 7 out of 9 points on the NOS scale, and 2 studies scored 6 out of 9 points on the NOS scale. These articles were full-text and published in English between 2012 and 2018. All articles addressed the incidence of falls in older adult patients following lower extremity joint replacement surgery. 14 studies together made a combined sample of 1,284,456 patients and 12,879 cases of falling Pooled themes from meta-analysis: Theme one: Age and gender From 10 studies in the meta-analysis, researchers yielded an admission age of 68.9 years for patients who experienced postoperative falls after lower extremity joint replacement. This age of fallers following TJA is an average of 3.2 years older than patients who do not fall after TJA. Researchers assigned an odds ratio of 1.05 to this data. Sex differences between fallers and non-fallers were reported in 8 studies in the review. The meta-analysis found that females were more likely to fall following TJA than males, yielding an odds ratio of 1.62.

	Theme two: Body mass index (BMI) 8 studies in the meta-analysis indicated an average BMI of fallers that is 0.11 kg/m^2 higher than those in the non-fallers group. Pooled meta-analysis results found no specific difference between BMI but indicated that overweight patients were more likely to fall with an odds ratio of 1.18. Theme three: Falls history Results indicated that falls incidence following TJA was higher for those who had a prior history of falls, as explored in 7 of the studies in the meta-analysis. Researchers calculated an odds ratio of 3.56 too falls history and the risk of falling after lower extremity joint replacement. Theme four: Walking aid Five studies in the meta-analysis explored the effect of using a walking aid on falls. Findings indicated that there was a substantial difference in fall outcomes when patients used a walking aid. This factor was assigned an odds ratio of 1.71. Theme five: Medical comorbidities Multiple studies included in the meta-analysis explored the impact of comorbidities on fall incidence. Diabetes has an odds ratio of 1.39, cardiac disease has an odds ratio of 1.25, hypertension has an odds ratio of 1.10, and chronic obstructive pulmonary disease (COPD) and depression both had an odds ratio of 1.11. Each of these chronic conditions is associated with an increased risk of falls in patients following TJA. Theme six: Activities-specific balance confidence scale (ABC Scale) The ABC Scale is a measure of balance confidence, vestibular function, and functional joint replacement. Findings from the study indicated that ABC Scale scores are negatively correlated with falls after lower extremity joint replacement.
Authors' Discussion and Conclusion	Key Conclusive Findings Idea one: Falls are common among patients following arthroplasty. The accumulated incidence of falling after lower extremity joint replacement was 13.1% and prevalence of in-hospital falls was 1.0%. Idea two: Combined effects of age-related physiological changes and deconditioning after TJA increases the risk of falling within the first few months after the operation. Muscle loss occurs after TJA, leading to decrease in walking ability and balance. Idea three: An increased risk of falling may be related to age. Patients who fell after TJA were an average of 3.2 years older than those who did not fall. Age-related impairments in reflexes, strength, proprioception, and balance could account for this result.

	Idea four: Side effects during TJA recovery, such as joint pain and impairment in hip and knee mobility, lead to increased risk of falls. Consistency of Findings Consistent findings: Biological sex, weight, history of falls, and existing comorbidities are risk factors of falling. Studies throughout the meta-analysis showed that physiological mechanisms that reduce bone density, impair somatosensory systems that impact balance, induce muscle weakness, and increase frailty increase the occurrence of falls, especially after joint replacement. Inconsistent findings: Meta-analysis results yielded several statistically insignificant risk factors for falls. While 8 of the 14 studies included BMI as an indicator for fall risk, the meta-analysis calculated a p-value of 0.87 for this variable, making it statistically insignificant. Similarly, p-values significantly greater than 0.05 were calculated for range of flexion and extension, metal component scores, and physical component scores, meaning these factors did not produce sound statistical evidence that they can contribute to increased fall risk following TJA.
Authors' Limitations	Recognizing that some studies included in the meta-analysis may have chosen not to report on insignificant results, researchers acknowledge that the results of the meta-analysis may be overestimated. Other limitations reported by researchers include the variance in how risk factors were measured and the large time range between follow-up periods in some of the selected studies. Articles included in the review appear to be selected without biases of researchers. Two researchers evaluated and identified eligible articles independent of each other. Any disagreement between which articles to include was addressed in discussion until consensus was reached.
Authors' Implications For Practice and Future Research	"Fall prevention interventions have been extensively studied and found to be effective. Fall incidence and associated injuries may be potentially reduced by identifying patients at increased risk and providing targeted intervention delivered by rehabilitation clinicians pre- or postoperatively to reduce fall risk and subsequent injury in these patients" (p. 5, 11).

	Summary
APA Reference	Elliott, S., & Leland, N. E. (2018). Occupational therapy fall prevention interventions for community-dwelling older adults: A systematic review. American Journal of Occupational Therapy, 72(4), 1–10. http://dx.doi.org/10.5014/ajot.2018.030494
Abstract	"OBJECTIVE. Accidental falls among community-dwelling older adults are preventable and increase the risk of morbidity, hospitalization, and institutionalization. We updated and broadened a 2008 systematic review examining the evidence for the effectiveness of fall prevention interventions in improving fall-related outcomes, occupational performance, quality of life, and health care facility readmissions for community-dwelling older adults. METHOD. We searched and analyzed literature published from 2008 to 2015 from five electronic databases. RESULTS. Fifty articles met the inclusion criteria and were critically appraised and synthesized—37 provided Level I; 5, Level II; and 8, Level III evidence. Analysis was organized into four intervention themes: single component, multicomponent, multifactorial, and population based. Mixed evidence was found for single-component and multifactorial interventions, strong evidence was found for multicomponent interventions, and moderate evidence was found for population-based interventions. CONCLUSION. These findings can inform the delivery and integration of fall prevention interventions from acute care to community discharge" (p. 1).
Your Focused Question and Clinical Bottom Line	Question: What occupational therapy interventions exist for reducing falls in community-dwelling older adults and are they effective? Clinical Bottom Line: The interventions that exist for fall prevention in community-dwelling older adults include population and individual level interventions that include both functional exercise and education as well as individualized fall risk assessments, especially in the home.

Your Lay Summary	The reason for this study was to look at how occupational therapists can lower older people's chances of falling. Various articles were used to try to find out which strategy would be the best one to use with older people to decrease their chances of falling. Occupational therapists can use one factor or a combination of factors to decrease falls. The results of this study showed the importance of using multiple ways to lower falls in older adults like teaching the person about ways they can prevent falls and having the person exercise to improve their health. This information can be used in health care, because it shows that older people need both training and ways to improve their health to stop falls from happening. It also shows the importance of looking at the home of the older person and adjusting when needed to keep the person safe. Lastly, more should be found to find the best possible information to give to occupational therapists and older people about preventing falls.
Your Professional Summary	The objective of this study was to locate the evidence for fall prevention interventions for community-dwelling older adults. This systematic review included a designated team of researchers who searched databases to find articles that met the inclusion criteria. After going through all the studies found, the researchers picked 50 articles to include in this systematic review ranging from level I to level III evidence. Specifically, there were 37 level I articles, 5 level II articles, and 8 level III articles included. After locating the articles that met the inclusion criteria, the research team grouped the studies into four different themes: single-component, multicomponent, multifactorial, and population-based fall prevention interventions. Strong evidence was found for multicomponent interventions (i.e. using education and exercise programs for fall prevention), whereas moderate evidence was found for the other categories. Some strengths of this systematic review are the organization of different themes for the articles found and the use of examples of various interventions under each theme. The authors noted some important weaknesses or limitations of the study but two that need to be elaborated are the small sample size of some of the reviewed articles and the need for increase generalizability. Only single component and multifactorial fall prevention interventions had more than ten articles reviewed under each theme, which could affect the ability to generalize to practice. Overall, the results of this study supported that interventions that incorporate both functional exercise and educational components, individualized safety assessments and home modifications, and utilizing population-based exercise programs in various settings all promote safety and can reduce the risk of falls.
	Critical Appraisal

Stated Purpose or Research Question	"… What is the evidence for the effect of fall prevention interventions on fall-related outcomes, occupational performance, quality of life (QOL), and health care facility readmissions for community-dwelling older adults" (p. 2).
Background Literature	Key points of the intro section: Many (1 in 4) older adults (65 +) experience falls each year and 2.8 million are treated in the ER because of a fall. Falls can lead to conditions like TBI or hip fracture, which can impact daily tasks. Falls can be due to many factors including "impaired mobility skills, medication side effects, impaired vision, improper footwear, and environmental hazards" (p. 1). Therefore, a holistic approach must be taken when implementing fall prevention strategies Preventing falls is important because it reduces the risk for hospital readmission which decreases health costs. The previous studies only looked at fall prevention for community-dwelling older adults and not those that were transitioning from the hospital settings, so this study aimed to do that Theoretical perspective: Not reported
Research Design	Research design: Systematic Review Rationale for the design: I think the researchers in this study chose to do a systematic review because they wanted to look at the existing interventions for fall prevention in older adults and determine which ones were the most effective. For reviews of research, AOTA Level of Evidence: Level I Evidence (since it is a systematic review)

Method	Keywords: The different categories of key terms included those related to the population, rehab information, falls information, intervention: fall prevention and home modification, and study and trial designs. See supplemental table 1 for the extensive list of the search terms Databases: Medline, PsycINFO, CINAHL, OTseeker, Cochrane Database of Systematic Reviews Procedures This study followed the PRISMA guidelines The search terms were made from AOTA methodologist, other staff, a librarian specializing in medical research, as well as an advisory group (which included the review authors) The librarian conducted the search using databases (listed above). The librarian also searched reference lists of articles as well as hand searches The articles were reviewed to ensure the inclusion criteria was met, that it was an appropriate level of evidence, and looked at the quality of the article (i.e. looked at bias risk). The researchers evaluated each article by title and abstract first then reviewed the whole article when appropriate. The researchers would then discuss with the rest of the team why they think that article is worthy for further review and as a team they made a list of articles to be evaluated in the next stage The authors made sure the articles found fell within the occupational therapy scope of practice by looking at the Scope of Practice document and the OT Practice Framework

Filters	Research Designs included and not included: Only level I-III levels of evidence were included A meta-analysis was not done Inclusion and exclusion criteria: The inclusion criteria included studies "that were published in English in peer-reviewed journals between 2008 and 2015; that evaluated fall prevention interventions within the scope of occupational therapy; and that included fall-related outcomes, QOL, occupational performance (e.g., activities of daily living [ADLs] or instrumental activities of daily living [IADLs]), or hospital readmissions as a primary outcome" (p. 2). Other inclusion criteria were that the mean age of participants in the studies were 65 and older and that the intervention must be given in the community or in a health care related setting where the fall outcomes were looked at after discharge to the community (like in the patient's home or in an assisted living facility). The exclusion criteria for articles were if the articles were "case series, pilot studies, case reports, expert or consensus opinions, conference proceedings, non–peer-reviewed research literature, and dissertations or theses; if they examined interventions outside the scope of occupational therapy; if they were published outside the inclusion dates; and if the topics were covered in other AOTA Practice Guidelines (e.g., home modifications)" (p. 2-3). Total references found: A total of 50 articles were included in the systematic review Of the 50 articles, 37 were level I, 5 were level II, and 8 were level III (this information was found in Figure 1 on p. 4) Process for eliminating references: From the initial database search, 789 articles were found. The amount of articles were then narrowed down after removing duplicates, excluding articles based on the title, abstract, and assessing the full text of articles to determine eligibility Data extraction, risk of bias, and data analysis: Data was extracted from the final list of articles in order to look at the strength of evidence and the risk of bias To look at risk of bias, the researchers used the Cochrane risk of bias guidelines for intervention studies and the Assessment of Multiple Systematic Reviews (AMSTAR) system The researchers grouped the data analysis into four themes: strong evidence, moderate evidence, limited evidence, and mixed evidence

Results	Description of the articles: 50 total articles included in the systematic review (37 = level I; 5 = level II; 8 = level III studies) "Research studies were grouped into four themes addressing single-component (14 studies), multicomponent (group-based; 7 studies), multifactorial (individually tailored; 19 studies), and population-based (10 studies) interventions" (p. 3). Analysis/theme one: Single-Component Fall Prevention Interventions These interventions focus on single fall risk factors (like balance) Of the 14 included studies, 11 of them were level I, 2 were level II, and 1 was a level III The included interventions were exercise, guided imagery and relaxation, occupational therapy home and functional assessments, and education on fall prevention Results: mixed evidence was found to support the use of single-component fall prevention interventions. It's important to note that there was not a lot of information supporting the use of guided imagery and relaxation, home and functional assessments, and education Analysis/theme two: Multicomponent Fall Prevention Interventions (Group Based) These interventions "target a prescribed set of fall risk factors" (p. 4). Out of the 7 studies, 6 were level I and 1 was level III Strong evidence was found between these interventions and significantly improving fall-related outcomes Specific outcomes included balance confidence, less falls, better gait speed, and improvements in occupational performance through better performance in ADLs/IADLs, better quality of life, and fall self-efficacy All of the included studies used both exercise and education in the interventions Analysis/theme three: Multifactorial Fall Prevention Interventions (Individually Tailored): These interventions are "individually tailored to target clients' multiple fall risk factors" (p. 5). Mixed evidence was found for this set of interventions due to inconsistent or conflicting findings Out of the total 19 studies included under this theme, 8 found positive effects, 4 found conflicting results, and 7 found no effect of the individually tailored intervention 7 of the studies were RCT or level I and 1 of the studies was a level III Out of all the studies looked at under this theme, some "common interventions included individualized fall risk assessment, environmental intervention, goal development, assessment and training, education, and group activities" (p. 5).

	Analysis/theme four: Population-Based Fall Prevention Interventions These are interventions that can be used across entire communities Of the total 10 studies for this theme, 2 were level I, 3 were level II, and 5 were level III Moderate evidence was found for the use of these population level interventions This is because there were inconsistencies in 3 of the studies which stopped the evidence of being categorized as strong 6 of the studies found improvements in fall-related outcomes; 1 found no significant effect; 3 found inconsistent results depending on the measured variable The interventions used in these studies were either existing effective population-based fall prevention program interventions (like Stepping On or A Matter of Balance) or other multi-component interventions that were population-based 6 of these studies looked at the existing population-based fall prevention programs as mentioned above and the other 4 looked at programs in the regional area
Authors' Discussion and Conclusion	Idea one: In order to improve clients progress and outcomes and to provide the best services, appropriate fall prevention interventions must be delivered throughout different parts of health care (i.e. acute, post-acute, community). This systematic review summarized different occupational therapy fall prevention interventions and their effectiveness in order to maintain national health care initiatives and to provide the best possible evidence to practitioners. Idea two: There is a great need to educate occupational therapists on what fall prevention interventions are effective, especially because of the incidence of falls with serious consequences. Some of the vital and effective components of a fall prevention intervention program that occupational therapists should be aware of when developing programs for community-dwelling older adults include home assessment, modification, or hazard abatement Idea three: Occupational therapists are equipped to deliver fall prevention services due to their knowledge of function and how the environment impacts occupations. Although there are lots of evidence available supporting the use of fall prevention interventions, the results of this systematic review showed which interventions need further evaluation and better quality evidence.

	Consistent findings: Using both exercise and education as interventions for fall prevention The importance of individualizing assessments for fall prevention like assessing the home and making modifications when needed The need for occupational therapy practitioners to be knowledgeable on evidence-based interventions for older adults Inconsistent findings: Using just one component of a fall prevention program (like something that targets only balance) There were some inconsistencies in the data when the outcome that was being measured was changed. This was explained under the population-based fall prevention interventions section Another inconsistent finding was the evidence related to multifactorial interventions that were individually tailored
Authors' Limitations	"Limitations noted during the analysis of the appraised studies included a lack of objective measures, randomization, blinding, a control group, or risk of bias" (p. 6). Other limitations that impact generalizability include a small sample size in some of the studies, limited geographic area, or the use of a convenience sample. There is also difficulty knowing if the effectiveness of these interventions are sustained over time. Lastly, reporting bias and not using other databases like EMBASE could also be limitations.
Authors' Implications For Practice and Future Research	Implications of Occupational Therapy Practice: "Multicomponent or population-based fall prevention strategies that include exercise and educational components Individualized fall risk assessment, fall prevention education, and home safety assessment, modification, and hazard abatement as multifactorial components Lifestyle Integrated Functional Exercise to reduce fall risk Population-based fall prevention programs such as Stepping On and A Matter of Balance, which can be conducted in a variety of settings, including senior centers Functional exercises plus fall prevention education on proper footwear, home modifications, and fall recovery (e.g., getting up from a fall)" (p. 6). Implications for Occupational Therapy Research: "Conduct further high-level fall outcome research on single-component, multicomponent, multifactorial, and population based interventions to identify effective interventions. Investigate the effectiveness of water-based exercises, standard multidimensional exercise, guided imagery and relaxation, and

	occupational therapy home and functional assessment as single-component fall prevention interventions. Examine the effectiveness of fall prevention interventions in decreasing facility readmissions" (p. 7).

	Summary
APA Reference	Joshi, R., Joseph, A., Mihandoust, S., Hoskins, L., O'Hara, S., Dye, C. J., & Chalil Madathil, K. (2021). Understanding key home and community environment challenges encountered by older adults undergoing total knee or hip arthroplasty. *The Gerontologist, 61*(7), 1071–1084. https://doi.org/10.1093/geront/gnab025
Abstract	"Background and Objectives: Older adults undergoing total hip arthroplasty (THA) and total knee arthroplasty (TKA) experience significant challenges while navigating their homes after surgery and are at higher risk for falls and injuries. This study explored the specific home and community physical environment challenges faced by community-dwelling older adults while performing daily activities and actions taken to modify their homes before surgery. Research Design and Methods: Using a qualitative descriptive methodology, semi structured interviews were conducted with 22 older adult–care partner dyads pre- and post-surgery to identify key built environment barriers and facilitators in addition to home modifications made pre- and post-surgery. Results: Challenges anticipated by participants to perform daily activities pre-surgery varied from those experienced post-surgery. Lack of support along stairs or in bathrooms, flooring material, and transitions were significant concerns raised by the participants before surgery. Size and layout of home and ergonomics of resting furniture were recognized as issues post-surgery. Modifications ranged from easy fixes such as rearranging furniture, removing clutter, and installing grab bars to high-cost structural changes such as remodeling critical spaces such as bathrooms. Although participants agreed on the importance of conducting proactive home assessments and modifications before surgery, perceived costs and lack of knowledge or services limit older adults from implementing some changes. Discussion and Implications: Home modifications must be considered proactively before an event such as a THA or TKA. These should be done within the context of the specific needs, abilities, financial capabilities, and social and physical home environments of the individual and the residential caregivers." (p.1071)
Your Focused Question and Clinical Bottom Line	Question: Do home modifications made pre-surgery help older adults when recovering from total joint replacement reduce the risk of falls? Clinical Bottom Line: Home modifications made presurgery have been found to reduce the number of challenges that older adults face in their home after surgery which results in a reduced risk of falls.

Your Lay Summary	This study looked at older adults that underwent a total hip replacement or total knee replacement and how they were able to navigate their homes after surgery. The study involved 22 people who took part in interviews before and after surgery to determine the success of making home adjustments before their surgery and how that would affect their recovery at home. The people explained their challenges with their daily activities and how they faced activity challenges before and after surgery. When the people were interviewed after surgery it was found that home adjustments to their physical environment such as rearranging furniture and removing clutter was helpful and reduced the challenges that the older adults faced. Making home adjustments before a surgery was sometimes not always achievable due to lack of money, lack of knowledge and lack of help. Overall, it was found that home adjustments are best to be done before an older adult undergoes a total joint replacement surgery.
Your Professional Summary	The objective of this study was to see if making home modifications pre and post-surgery could help older adults that underwent a total THA or a TKA navigate their homes better. This study examined if physical adaptations could be made for community dwelling adults to reduce the number of challenges faced after surgery. 22 participants completed semi-structured interviews to provide qualitative data on barriers and facilitators in their environment. The study found that across all of the participants they did face challenges performing ADLS and IADL's in their homes after surgery. Some ways to combat these challenges included making home modifications such as moving to one floor of a multilevel home, making additions such as grab bars inside the home and installing ramps over stairs if needed/ possible. Strengths of this study include the effective use of the ecological theory of adaptation and aging to provide open-ended questions, having interviewers who were trained in using the interview protocol, and transcribing the interviews immediately after completion. Weaknesses of this study include the small sample size, the uneven number of participants undergoing each surgery, and little discussion concerning falls. The implications found that home modifications completed before surgery helped the participants navigate their homes after surgery. This finding supports that home modifications should be done before a patient undergoes surgery to help mitigate challenges after surgery.
	Critical Appraisal
Stated Purpose or Research Question	"The overarching purpose of this study was to gain a nuanced understanding of how the physical home environment may support mobility and daily activities of individuals undergoing THA/TKA from the perspective of the resident and care partners." (p.1073)

Background Literature	Key points of the intro section: “Older Adults experience postural instability, especially while standing and walking, resulting in a high incidence of falls and fall-induced injuries” (p.1072). “Adults undergoing TJA can potentially make home modifications proactively before their hospital stat to facilitate a safe recovery postsurgery” (p.1072) Theoretical perspective: Nahemow and Lawton’s (1973) Ecological Theory of Adaptation and Aging. The Ecological Theory of Adaptation and Aging states that people normally struggle to exist in harsh environments that are nutritionally and energetically inadequate.
Research Design	Research design: Using a qualitative descriptive methodology, semi structured interviews were conducted with 22 older adult–care partner dyads pre- and post-surgery Rationale for the design: Rationale for the design was a “qualitative descriptive methodology was utilized for this study. Interviews were conducted with patients undergoing total joint (hip or knee) replacement surgery and their care partners pre- and postsurgery to obtain their perspectives at two key points in the process” (p.1073) For quantitative primary research, AOTA Level of Evidence: Not Applicable
Sampling	Sampling method used and the rationale (if given): “Study participants were recruited when they arrived at the presurgery joint replacement boot camp. The nurse manager screened eligible patients based on the patients’ health records, presented them with a recruitment card highlighting the study’s details, and asked them to indicate a willingness to participate in the study” (p.1073) Inclusion criteria: “All community-dwelling older adults (residing in their homes), 50 years or older, without any diagnosed cognitive impairments, and undergoing knee or hip replacement surgery at the facility were eligible for the study” (p.1073) Exclusion criteria: “Some participants who were interviewed during the presurgery phase but lacked the willingness to participate in the follow-up interviews due to postsurgical complications such as excessive pain were not interviewed postsurgery” (p.1073) Power/sample size estimate: Not reported

Sample	Number of Participants (Total and Subgroups): 22 Characteristics of the Sample (Gender, Race/Ethnicity, Diagnosis/Disability): The participants came from varying socioeconomic status with 15 females and 7 males. The participants ages ranged from <55 to 85+. For the housing type 12 lived in a single level/ranch-style house while 8 lived in multilevel housing and 2 lived in an apartment. For the care partner presence 17 of the participants were living with a spouse while the other 5 either lived with a roommate or lived alone. The participants were undergoing either a TKA or a THA. Dropouts: Not reported
Groups	Types of groups: This study was broken down into demographic groups: Group one description: Interview participation with either patient alone or patient with caregiver Group two description: Patient gender Group three description: Surgery type Group four description: Patient age Group five description: Housing type Group six description: Care partner presence Group seven description: Prior surgery experience Group eight description Patient's use of mobility device postsurgery
Method	Primary methods to answer research question: "The questionnaire was open-ended to elicit a deep and detailed discussion about functional competencies, built environment features, and the interaction between these. Questions were developed to identify competencies such as mobility and independence. For instance, "What sorts of challenges have you experienced with being able to easily move around in your home or outside your home?" A question asked during presurgery interviews to understand the link between the built environment and mobility was, "What aspects or features in your home do you think might pose challenges to your ability to move around and do those activities safely after your surgery?" Participants were asked about the modification strategies adopted to minimize barriers in their homes, resources, and assistance available to them pre- and postsurgery. Several prompt questions were used to uncover a deep understanding of the subject. The postsurgery interviews followed a similar structure as the presurgery interview, though the focus was on actual experiences postsurgery" (p.1073)

Measurement and Outcomes	Measure: Questions were based on the ecological theory of adaptation and aging, and they were also based on the framework for healthy aging to guide the semistructured interviews. The interviews were conducted by people who have expertise knowledge on aging issues. As stated in the methods section they questionnaire was open-ended to get deep and detailed answers. The questions focused on mobility and independence.
Results	Description of the sample: The final sample size was 22 and it included 16 participants that underwent TKA and 6 that underwent a THA. 19 participants were interviewed pre-and postsurgery while 3 were only interviewed before surgery. 5 participants participated alone while the other 17 has spousal support. For the interviews some were conducted with the participant and their care partner or it was just with the participant if they did not have a care partner. Analysis/theme one: Discussed challenges posed by the built environment while conducting ADLS and IADLs pre and post-surgery such as home size and layout, steps and stairs, doorways and hallways, and flooring. Bathing was also discussed in how layout of the bathroom affected participants after surgery. Analysis/theme two: Discussion focused on dressing and grooming for those in multilevel apartments and how participants accessed clothing. Participants found that closet doorways were not wide enough to fit a walker through and that reaching for items high or low was difficult. Analysis/theme three: Discussed how participants planned alternatives to performing IADL's. All the participants avoided doing outdoor activities without assistance. Analysis/theme four: Factors that contributed to falls included footwear, weakness and pain after surgery, and excessive body weight which resulted in loss of balance. Analysis/theme five: Participants dealt with challenges by relocating to more accessible homes or by making structural renovations. All the participants made at least one home modification presurgery. Analysis/theme six: Some participants weren't able to make home modifications due to financial circumstances and an inability to do the modifications themselves due to health isssues, lack of expertise etc.
Authors' Implications For Practice and Future Research	"This study provides a framework for future home assessment tool development that should include an assessment of specific areas in the home (steps, doorways, etc.) within the context of specific activities (e.g., ambulating, transferring) or tasks that a user might perform. Most existing home modification tools fail to evaluate home features within the context of specific tasks and activities that may be challenging for a specific individual (Mihandoust et al., 2020). This study provides a foundation for adapting existing home assessment tools or developing new tools that include evaluation components related to the individual's changing

	abilities, limitations, needs, and performance within the context of their environmental, psychological, and social environments." (p.1082)