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## Effectiveness of Multifaceted Fall Prevention Programs in Community-Dwelling Older Adults

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# Effectiveness of Multifaceted Fall Prevention Programs In Community-Dwelling Older Adults

Marissa Friday & Cali Mohney



**CASE STUDY: Client is a 72 year old female who has suffered a fall from loss in balance, which has increased fear of falling and decreased activity. Occupational Therapy wants to implement a Multifaceted Fall Prevention Program to improve participation and quality of life.**



## 1 Ask: Research Question

What is the effectiveness of a Multifaceted Fall Prevention Program for community-dwelling older adults?

## 2a Acquire: Search Terms

Patient/Client groups: Community-Dwelling Older Adults

Intervention: Multifaceted Fall Prevention Program

Comparison: Multifaceted Fall Prevention Program versus Single Intervention or No Intervention

Outcome: To Reduce Falls and Fall-Related Outcomes.

Database: ProQuest, Cochrane, Elsevier-Science Direct, PubMed.

Search Words: Community, Older Adult, Falls, Multifaceted Fall Prevention Program, Occupational Therapy

## 2b Acquire: Selected Articles

**1. Chase, Mann, Wasek, & Arbesman (2012):** A systematic review examined Single Intervention (Physical Activity, Home Assessment and Home Modification) and the use of a Multifaceted Fall Prevention Programs.

**2. Elliott & Natalie (2018):** A systematic review that used a Single Intervention and Multifaceted Fall Prevention Programs.

**3. Hopewell et al. (2018):** A systematic review examined Multifaceted Fall Prevention Programs versus the use of a Single or No Intervention.

## 3a Appraise: Study Quality

**1. Chase, Mann, Wasek, & Arbesman (2012):** The study included 33 studies- 31 Level I RCTs and 2 Level II.

**2. Elliott & Natalie (2014):** The study included Level I Articles that included 50 articles- 37 Level I, 5 Level II, and 8 Level III.

**3. Hopewell et al. (2018):** The study came from a Cochrane Review and is a Level I Article- 62 Level I RCTs.

## 3b Appraise: Outcome Measures

**1. Chase, Mann, Wasek, & Arbesman (2012):** Number of participants falling, number of hospital admissions, ADLs and IADLs performance, quality of life, fear of falling, and participants perception of one's own health.

**2. Elliott & Natalie (2018):** Fall related outcomes were: rate of falls, injurious falls, fear of falling, improvement in balance confidence, quality of life, balance and mobility skills, improved occupational performance, and awareness of fall reduction strategies.

**3. Hopewell et al. (2018):** Rate of falls, recurrent falls, fall-related fractures, hospital admission/medical attention, and health-related quality of life.

## 3c Appraise: Interventions

**1. Chase, Mann, Wasek, & Arbesman (2012):** Multifaceted Fall Prevention Programs included variations of the following: home modifications, education, medication management, vision management, gait/balance training, ADLs, IADLs, and strength/balance training compared to Single Interventions such as tai chi, balance, or lower-limb strengthening

**2. Elliott & Natalie (2018):** Multifaceted Fall Prevention Programs included variations of the following: education (cognition, postural hypotension, vision impairment, continence), exercise (balance, strength, functional tasks, walking, dual/multi-task activities, obstacle course training), pain management, goal development/monitoring, mentoring, motivation, and educated on community resources compared Single Interventions such as LIFE or water-based interventions.

**3. Hopewell et al. (2018):** Multifaceted Fall Prevention Programs included variations of the following: exercises (gait, balance, functional, strength, resistance), medication management, incontinence management, fluid/nutrition therapy, cognitive behavioral interventions, assistive technology, home modifications, and education compared to Single Interventions such as strength, tai chi, or exercise.

## 4a Apply: Study Results

**1. Chase, Mann, Wasek, & Arbesman (2012):** Findings were increased rate of functional performance, quality of life, balance/strength, and a decrease fear of falling. Results were mixed in the Multifaceted Fall Prevention Programs in the number of falls.

**2. Elliott & Natalie (2018):** Mixed results that were found in the Single Interventions and Multifaceted Fall Prevention Programs. However, studies that included the home assessments/modification and hazard removal as a part of their Multifaceted Fall Prevention Program were found to be more successful.

**3. Hopewell et al. (2018):** Trials comparing Multifaceted Fall Prevention Programs with No Intervention showed that there may be little to no difference due to low quality evidence between the two.

## 4b Apply: Conclusions for Practice

Overall, these programs did appear beneficial in improving ADLs and IADLs performance, strength, balance, gait, fear of falling, and quality of life. However, mixed or insufficient data were found on Multifaceted Fall Prevention Programs helping to reduce the number of falls.

## References

- Chase, C., Mann, K., Wasek, S., & Arbesman, M. (2012). Systematic review of the effect of home modification and fall prevention programs on falls and the performance of community-dwelling older adults. *American Journal of Occupational Therapy*, 66, 284-291. <http://dx.doi.org/10.5014/ajot.2012.005017>
- Elliott, S., & Natalie, L. (2018). Occupational therapy fall preventions for community-dwelling older adults: A systematic review. *American Journal of Occupational Therapy*, 72, 7204190040. <https://doi.org/10.5014/ajot.2018.030494>
- Hopewell, S., Adedire, O., Copesey, B., Boniface, G., Sherrington, C., Clemson, L., ..., Lamb, S. (2018). Multifactorial and multiple component interventions for preventing falls in older people living in the community. *Cochrane Database of Systematic Reviews*, 7, CD012221. <http://dx.doi.org/10.1002/14651858.CD012221.pub2>

**Low quality or inconclusive evidence was found related to Multifaceted Fall Prevent Programs in community-dwelling older adults.**

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