

Title of Intervention: Group Exercise to Improve Balance and Reduce Falls

Intervention Strategies: Group Education, Individual Education

Purpose of the Intervention: To improve balance, muscle strength, reaction time, physical functioning and health status and to prevent falls

Population: Individuals over the age of 65

Setting: South Western Sydney, Australia; community-based

Partners: Health care providers

Intervention Description:

- Group Education: Participants attended a weekly structured exercise group in a community setting. An accredited exercise instructor led each class. These classes ran for one hour, over four terms for one year. The class content was designed by a physiotherapist to specifically address physical falls risk factors. After 5-10 minutes of warm up, the participants performed exercises designed to improve balance, coordination, aerobic capacity and muscle strength.
- Individual Education: A home exercise program based on the class content was also given to the participants, along with diaries to record participation.

Theory: Not mentioned

Resources Required:

- Staff/Volunteers: Exercise instructors
- Training: Not mentioned
- Technology: Not mentioned
- Space: Area for group classes
- Budget: Not mentioned
- Intervention: Exercise class content, home exercise program, exercise diaries
- Evaluation: Postal surveys, Short Form-36 scale, Physical Activity Scale for the Elderly, fear of falling scale

Evaluation:

- Design: Randomized controlled trial
- Methods and Measures:
 - Physical performance and general health measures were assessed using the Short-Form 36, Physical Activity Scale for the Elderly and fear of falling scales.
 - Falls were measured over a 12-month follow-up period using monthly postal surveys.

Outcomes:

- Short Term Impact: At retest, the exercise group performed significantly better than the controls in three of six balance measures: postural sway on the floor with eyes open and eyes closed and coordinated stability. The groups did not differ at retest in measures of strength, reaction time and walking speed or on Short-Form 36, Physical Activity Scale for the Elderly or fear of falling scales.
- Long Term Impact: Within the 12-month trial period, the rate of falls in the intervention group was significantly lower than that of the control group.

Maintenance: Not mentioned

Lessons Learned: Balance can be improved and the rate of falling reduced in at-risk older adults through participation in a weekly group exercise program and supporting home exercises.

Citation(s):

Barnett, A., B. Smith, et al. (2003). "Community-based group exercise improves balance and reduces falls in at-risk older people: a randomized controlled trial." *Age Ageing* 32(4): 407-14.