# Efficacy of occupational therapy prescribed home modifications: A systematic review

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**Introduction:**
Occupational therapists commonly prescribe home modifications. While previous systematic reviews have investigated the effectiveness of occupational therapy home modifications for older people on fall rates, there is limited understanding of effects beyond this outcome.

**Aim:**
To determine if home modifications prescribed by occupational therapists reduce fall rates, increase independence in activities of daily living or improve quality of life.

**Method:**
A systematic review was conducted with meta-analysis of comparable data where able. Four electronic databases (Medline, CINAHL, Embase, OT-Seeker) were searched for non-randomised and randomised controlled trials that evaluated home modifications recommended by an occupational therapist. Two authors screened abstracts for inclusion and study quality was evaluated using the PEDro scale. Effect sizes were calculated as standardised mean differences (SMD) or risk ratios.

**Results:**

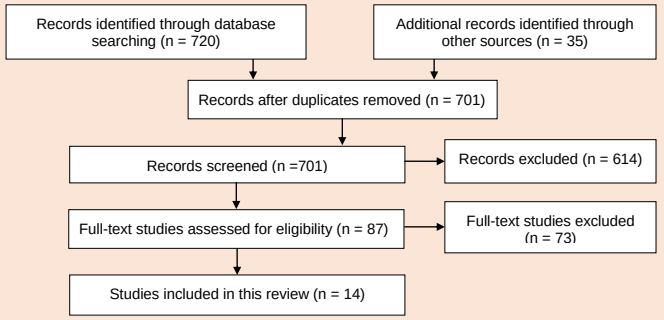


Figure 1 : Study selection flowchart

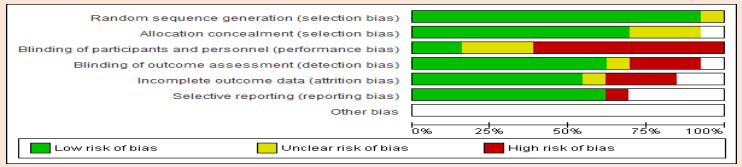


Figure 2: Risk of bias in included studies

*Quality*
The quality of our included studies (n=14) ranged from 4-8 on the PEDro scale with an average PEDro score of 6.1 indicating moderate quality.

*Participants*
All participants in our included studies (n = 3351) were community dwelling and mean age ranged from 60.4 to 83.6 years. 2305 (69%) were female.

*Intervention*
All studies involved occupational therapy prescribed home modifications as the intervention, however 50% of included studies included this as part of a multifactorial intervention program.

*Falls*
Occupational therapy prescribed home modifications showed a moderate effect on the number of falls (RR 0.66; CI 95% 0.61,0.72).

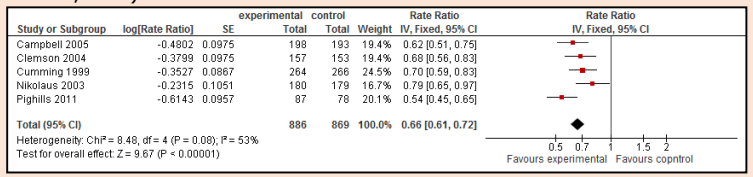


Figure 3. Risk ratio (95% CI) of the effect of home modifications compared with no home modifications on number of falls in the 12 months following the intervention.

*Activities of Daily Living*
Occupational therapy prescribed home modifications showed minimal effect on independence in self-care (SMD 0.90; CI 95% -0.27,2.06) (SMD 0.97; CI 95% -0.10,2.04). Five different outcome measures were used in the included studies.

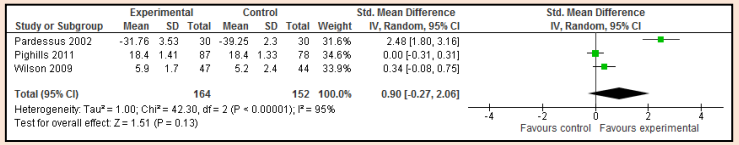


Figure 4. SMD (95% CI) of the effect of home modifications compared with no home modifications on self care at 12 months following the intervention.

*Quality of Life*
Occupational therapy home modifications showed minimal effect on quality of life (SMD -0.02; CI 95% -0.16,0.11). Two quality of life measures were used in our included studies.

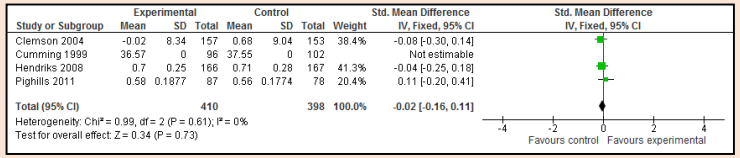


Figure 5. SMD (95% CI) of the effect of home modifications compared with no home modifications on quality of life at 12 months following the intervention.

**Significance of Findings to Allied Health:**
Occupational therapy home modifications can reduce falls but have minimal effect on other investigated outcomes.
Occupational therapists and allied health managers can use our study results to guide resources towards home modifications for people who have previously fallen at home.

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