

POSTER PRESENTATION 1: HOUSING AND DAILY LIVING

The home environment as fall risk factors among community-dwelling frail older people: A systematic review

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Purpose Falls are accidents that seriously affect the health of older people (Ferrer et al., 2014). Falls among older people are mostly caused by environmental factors and situations (Tsai et al., 2014). The home environment is increasingly being emphasized as a key factor in home falls among frail older people because while non-frail older people have a high exposure to outdoor environmental risks, frail older people are exposed to indoor environmental risks (Lord et al., 2006). Some systematic reviews tried to investigate the environmental approach for falls (Clemson et al., 2008; Chase et al. 2012). However, the number of studies included the review was small, and the heterogeneity was quite high, so there is a limit to draw comprehensive conclusions about the environmental factors related to home falls. Therefore, we try to review studies of various designs and seek to clarify the interpretation and application of the review results by selecting the target population as frail order people. **Method** We performed a systematic review to draw comprehensive conclusions regarding environmental factors related to home falls by searching the MEDLINE, CINAHL, EMBASE, and Cochrane Library, as well as grey literature databases. We searched by combining the following keywords: (1) 'aged' AND 'frailty', (2) 'risk factors' OR 'home environment', (3) 'accidental falls', and (4) 'community' without limitations on either the study type or language. The inclusion criteria for this systematic review were as follows: (1) studies in which the participants were community-dwelling frail older people, (2) outcomes related to falls (such as fall occurrence, number of falls, and frequency of falls), and (3) studies specifically reporting home environmental factors related to falls. And studies that did not use a quantitative (randomized controlled trials [RCT], non-RCT) design, or did not report the study methods were excluded. **Results and Discussion** Of the 7699 studies initially retrieved from the electronic databases, six intervention and six non-intervention studies were included in the analysis. Seven out of the 12 studies assessed environmental hazards using relevant assessment tools. Interventions were provided for the bathroom/toilet (66.7%); bedroom (66.7%); living room (50%); and for slipping and tripping (83.3%) which were identified as frequent fall location and situations through non-intervention studies. Only two intervention studies mentioned individualized approaches to older people or participation of older people, and in all three studies that were significant, the intervention was provided by a multidisciplinary expert team. The findings indicate that standardized environmental evaluations should be provided using structured assessment tools, and that the intervention process requires the participation of older people with multidisciplinary experts.

References

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