

Home ownership and fall-related outcomes among older adults in South Korea

30 May 2012 • Prague, Czech Republic

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BACKGROUND

Falls: a major clinical and public health concern

❑ Common

- ❑ Annual incidence among elderly (≥ 65) in the US: 33%
- ❑ Prevalence of recurring falls: >50%

❑ Large health and economic burden

▪ Health consequences

- 10–15% result in **severe fractures** (25% recovery rate of hip fractures)
- **Other serious consequences:** depression, social isolation, head injuries, limiting movement, **fear of recurring falls**
- Prevalence of falls and fall-related complications increases with age

▪ Healthcare costs

- Direct medical costs: **200M USD** (fatal falls) and **19B USD** (non-fatal falls)
- Double with increasing age: **up to 8B USD** among adults aged 75-84 years

Promoting mobility and physical activity without increasing the risk of falling is important

Individual risk factors for falls

demographics,
anthropometrics

geriatric conditions

medication use,
physical function

lifestyle

Physical activity

- A major health-promoting factor
- Maintains and improves mental and functional health
- Increases mobility and relieves the pain of chronic pain sufferers

Fear of recurring falls

- A major activity-restricting factor
- Negative impact on physical and psychological health

Environmental risk factors for falls

HOME OWNERSHIP

Home ownership and falls among older adults

- ❑ South Korea has one of the **highest rates of elderly poverty** among developed countries (approx. 50%)
- ❑ Three major types: own home, long-term & short-term rental
- ❑ A substantial number of **older adults live in short-term rental homes** with relatively small amounts of monthly rent
- ❑ **Short-term rental homes** can potentially influence fall-related outcomes:
 - Overall low quality of the home environment: risk factors
 - Occupants' attitude and willingness to improve their housing conditions: risk factors are less likely to be addressed by occupants and owners

These risk factors for falls are less likely to be addressed in short-term rental homes

- Tripping or slipping hazards
- Absence of stair railings or grab poles
- Having unstable furniture
- Uneven flooring
- Poor lighting



HYPOTHESIS

Compared with own home, short-term rental home is associated with:

- ❑ Increased risk of fall incidence among older adults
- ❑ Increased risk of fear of falling
- ❑ Increased risk of limiting activities due to fear of falling

DATA

Korean Longitudinal Study of Ageing (2006 and 2008)

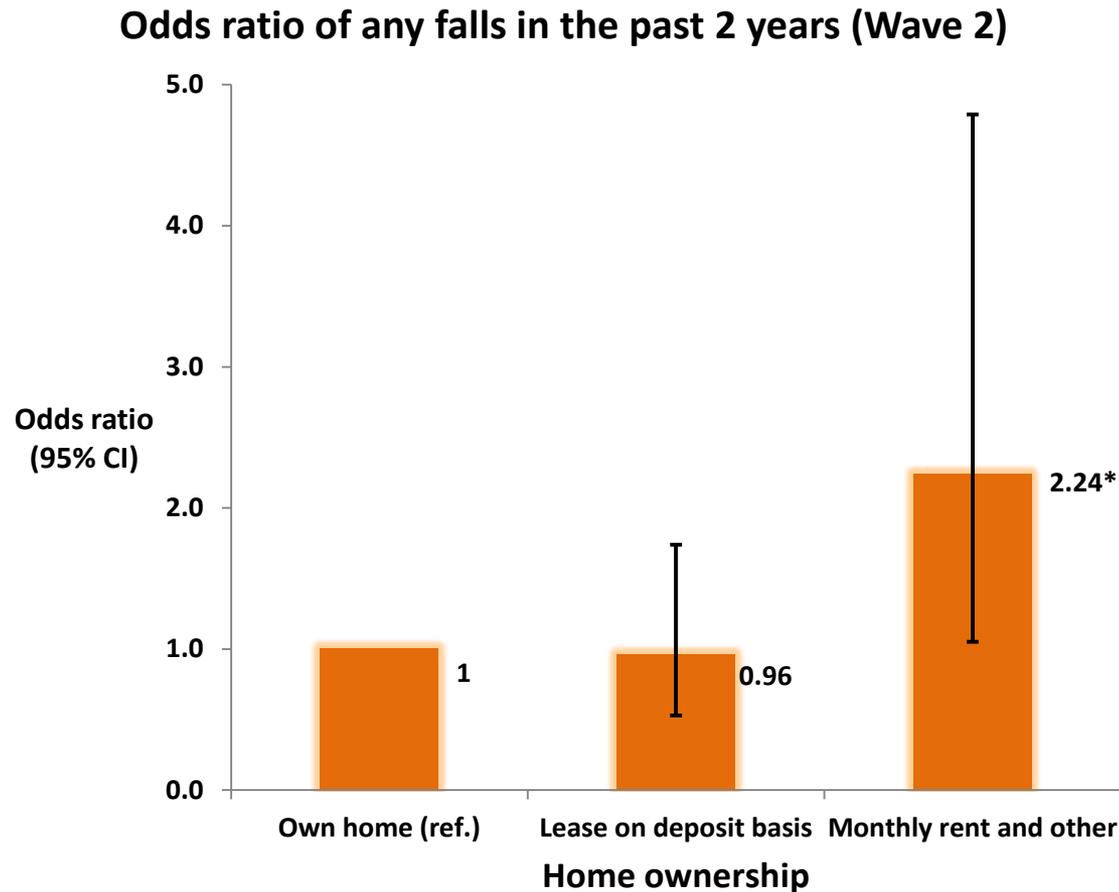
- ❑ Nationally representative sample of adults ≥ 45 in 2006
- ❑ Variables
 - Three fall-related outcomes
 1. Incidence (any new falls in the past 2 years, i.e., 2006-2008)
 2. Fear of falling
 3. Limiting activity due to fear of falling
 - Three variables on home ownership
 1. Own home
 2. Long-term rental (deposit-based)
 3. Short-term rental (monthly rent-based) and other
 - Control variables: age, gender, currently married, coresiding with adult child, education, total assets, residence area, self-reported health, grip strength, eyesight, any falls in past 2 years

Summary statistics

Variables	Incidence model (N=8,016)	FoF/Activity limitation model (N=17,214)
<i>Fall-related outcomes</i>		
Any falls in past 2 years (Wave 2)	2.4%	-
Fear of falling	-	44.9%
Limiting activity due to fear of falling	-	33.1%
<i>Home ownership variables</i>		
Home owner	77.5%	78.9%
Lease on deposit basis (long-term rental)	11.1%	10.8%
Monthly rent and other (short-term rental)	11.4%	10.2%

RESULTS (1)

Compared with owned home, short-term rental home predicted higher likelihood of reporting any falls in the past 2 years



Note: * $p < 0.05$; logistic regression model controlled for age, gender, being currently married, coresidence with an adult child, education level, total household assets, residence area, self-reported health, grip strength and eyesight.

RESULTS (2)

Compared with owned home, short-term rental home predicted higher likelihood of limiting activity due to fear of falling (but not fear of falling per se)

	Selection equation: <i>Fear of falling</i>	Main equation: <i>Limiting activity due to fear of falling</i>
<i>Home ownership</i>		
Home owner	Reference	Reference
Lease on deposit basis	Not stat. sig.	Not stat. sig.
Monthly rent and other	Not stat. sig.	↑ & Stat. sig.

Note: Probit model with sample selection controlled for age, gender, being currently married, coresidence with an adult child, education level, total household assets, residence area, self-reported health, grip strength and eyesight, and survey year. Statistical significance was determined by $p < 0.05$.

Discussion

- Housing and the environment are important determinants of fall-related outcomes among older adults in South Korea
- Older adults living in short-term rental homes are at-risk group
- Implications
 - Risk assessment tools
 - Awareness
 - Financial support



transforming
medicine,
improving lives

Thank you!



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