

# Intergenerational Living Arrangements in South Korea: Health and Economic Implications



한국보건사회연구원  
2012. 11. 6.

도영경

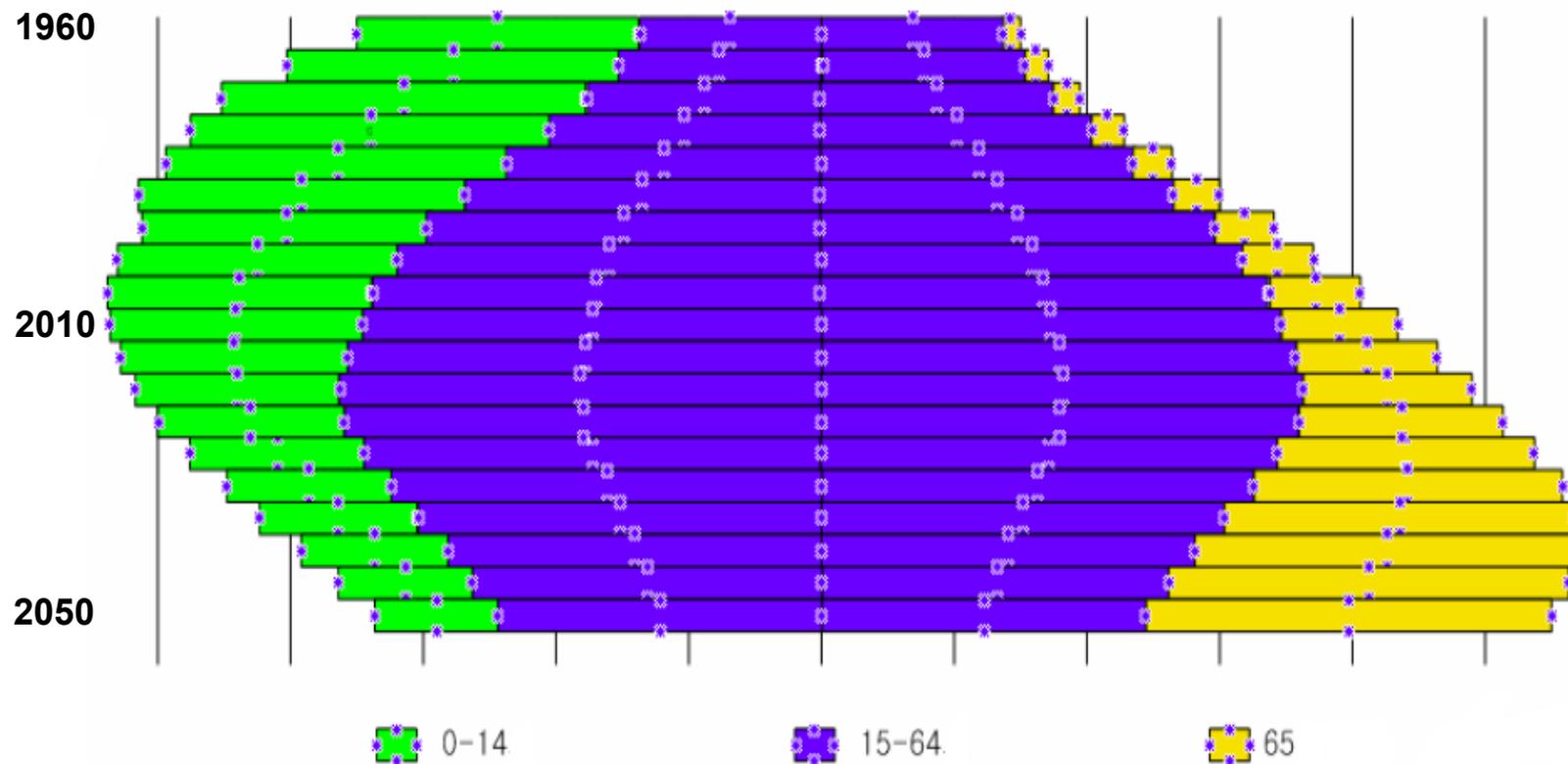
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## Elderly living arrangement 관련 두 가지 연구

- The effect of coresidence with an adult child on depressive symptoms among older widowed women in South Korea: An instrumental variables estimation
- Expectations about bequests and informal care



# 한국의 인구 구조 변화



Source: Korea National Statistical Office (2006)



# The effect of coresidence with an adult child on depressive symptoms among older widowed women in South Korea: An instrumental variables estimation

Do YK, Malhotra C. The effect of coresidence with an adult child on depressive symptoms among older widowed women in South Korea: an instrumental variables estimation. **Journal of Gerontology B: Psychological Sciences and Social Sciences**. 2012 May;67(3):384–91.

## Background:

# Widowed women living alone in an aging Korea

- Rapid aging in South Korea
  - Elderly ( $\geq 65$ ) from 9% to 38% (2050)
  - Life expectancy at 65 years: 21 years (women); 16.6 years (men)
- Stresses to older widowed women in “Anomie”
  - Declining intergeneration coresidence & family support (“old” norm) vs. still limited social support (“new” norm): vulnerable to stresses
  - High rates of depression and increasing rates of suicide in elderly

# Elderly suicide

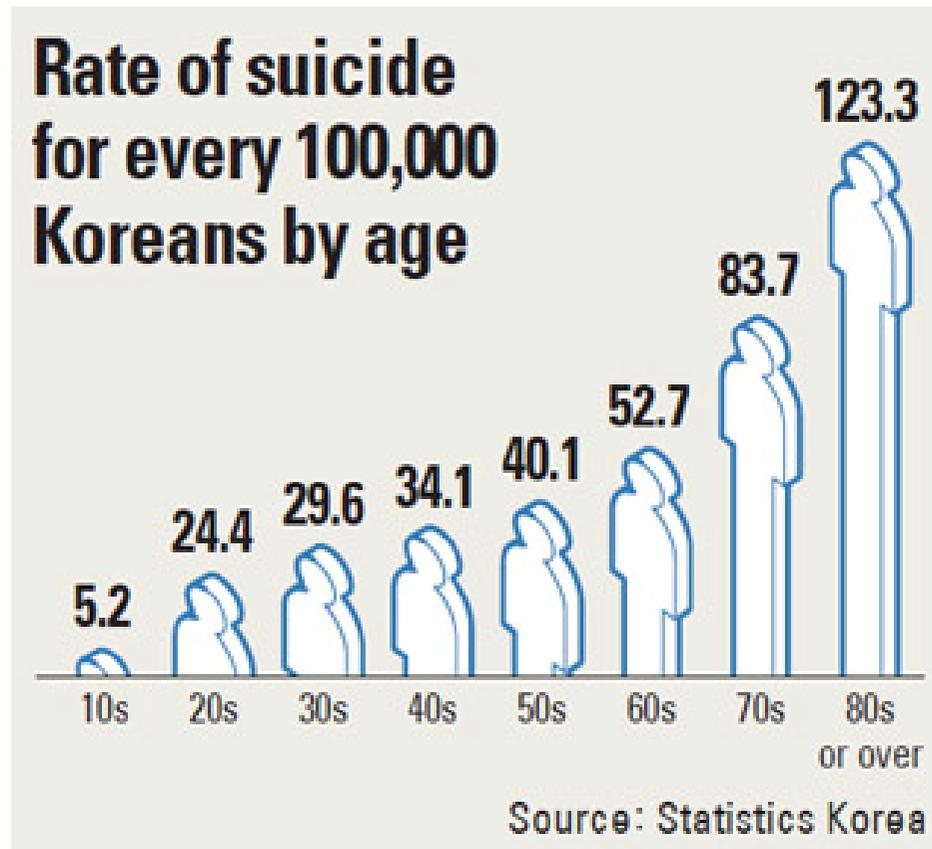


Figure source: Korea Joongang Daily (Sept 10, 2012)  
"Suicide a growing trend in elderly"

## Background:

# Coreidence with adult child may be protective

- Women's expectations satisfied (social norm of filial piety)
- Emotional/instrumental/economic support from adult child coresiding
- Cultural differences (vs. Western)
- A testable hypothesis: "Widowed women coresiding with adult child have less depressive symptoms than widowed women living alone"

**Methodological issue:**

## **Estimating the causal effect of coresidence**

- Randomized controlled trial?: Unethical and not feasible
- Comparison of group means of depressive symptoms scores
- Multiple regression controlling for observable confounders
- Selection on unobservables (endogeneity) may be an issue

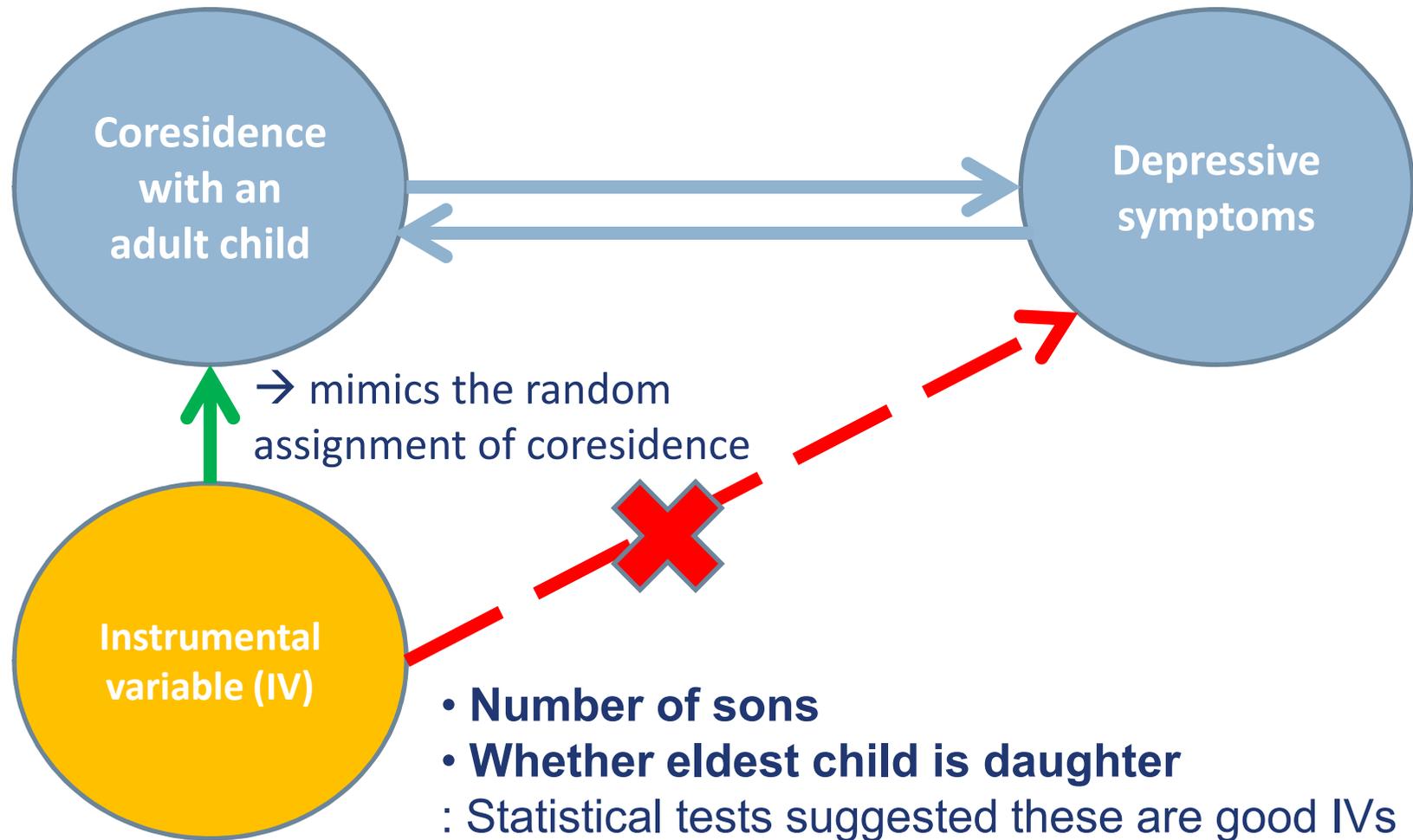
## Methodological issue:

# Estimating the causal effect of coresidence

- Selection on unobservables (endogeneity) may be an issue
  - Comment on our working paper (2010) by Johar and Maruyama (2011) “Does Coresidence Improve an Elderly Parent’s Health?”

To the best of our knowledge, Do and Malhotra (2010) is the only study that attempts to correct for selection on unobservables. Using an instrumental variable technique, they find that coresidence reduces depressive symptoms among South Korean widowed elderly mothers. They use the number of sons as an instrument for coresidence and argue that it is an appropriate instrument in the Korean setting because it is related with traditional rules of coresidence and should not directly affect parent’s health.<sup>1</sup>

# Our approach: Instrumental variables estimation



# Data and Variables

- Data: Korea Longitudinal Study of Ageing (KLoSA), 2006/8
- Sample: Widowed women  $\geq 65$  (N=2,446) with at least one living child
- Outcome: 10-item CES-D (0 to 30, mean 10.0)
- Main predictor: Coresidence with adult child (mean: 57.9%)
- Covariates: demographic, socioeconomic, health variables
- Instrumental variables used
  - Number of sons (continuous)
  - Whether eldest child is a daughter (binary)

## Results

- OLS estimate: **-0.700** (95% CI: -1.196, -0.204)
  - Close to group mean difference, -0.097
- IV-2SLS estimate: **-7.749** (95% CI: -14.092, -1.407)
- Statistical test suggests that coresidence is endogenous in our model of CES-D score.
  - OLS underestimates the protective effect of coresidence on depressive symptoms.

# Discussion

- Accounting for the endogeneity of coresidence using IV method revealed a larger protective effect than found in naïve OLS.
- Decreasing rates of coresidence with children may pose a public health concern among widowed women in South Korea.
- Limitations
  - Did not measure the type and quality of actual or perceived support
  - Possible differences may exist by coresidence type
  - Limited to older community-dwelling widows



# Expectations about bequests and informal care

With Kelvin Foo. Under review.

# Hypothesis

- *H1*: Providing informal care to his or her parent increases an adult child's expected probability of receiving an inheritance in the future.
- *H2*: An elderly parent's expected probability of leaving an inheritance increases his or her anticipation that any adult children will be willing and able to provide informal care in the future.
- Our secondary hypothesis is that in both hypotheses, the estimated magnitude of effect for the main explanatory variable is smaller for parents and children who are coresiding than those who are not.

# Literature on intergenerational transfers and informal care

- Although two main motives for transfers – **exchange** and **altruism** – have emerged, agreement on which motive dominates remains to be clarified (Sloan et al. 1997; Perozek 1998).
- The **exchange motive** theorizes that parents and children provide time-related services or money to each other because of expectations that the other party, governed by the moral norm of reciprocity, would give back accordingly (Gouldner 1960).
- On the other hand, the **altruistic motive** postulates that parents and children provide time-related services or money to each other simply out of selfless intentions (Becker 1974).

# Exchange motive

- Early findings showed that children with higher incomes receive greater financial transfers from their parents than do lower income children; such a positive relationship between recipient's income and transfers contradicts the altruistic motive (Cox 1987).
- Furthermore, Bernheim and colleagues (1985) found a significant positive relationship between the bequeathable wealth of parents in poor health and the attention received from their children.
- Similarly, Henretta et al. (1997) showed a positive and statistically significant relationship between parents' past financial transfers and children's current caregiving propensities. Children's time help to parents was found to be positively related to their propensity to receive financial transfers from their parents, whereas financial transfers are intended as payments for time help (Cox and Rank 1992).

# Altruism

- In contrast, the altruism model implies that parents will give transfers to their children regardless of whether their children provide financial support to them or take care of them during old age, and that relatively more transfers are given to children with greater financial needs (Becker 1974; Cox 1987).
- McGarry and Schoeni (1995) reported an inverse relationship between income and transfers, suggesting altruistic motivations.
- Moreover, parents' expectations about giving a bequest do not significantly influence their expectations about entering a nursing home (Lindrooth et al. 2000), suggesting that expectations about giving a bequest have no effect on their expectations of receiving informal care from their children in the future.
- Sloan and colleagues (2002) showed that less affluent parents received more money from children. Compared with parents of a lower economic standing, parents of a higher economic status did not have a higher likelihood of receiving help from their children (Sun 2002).

## Exchange vs(?) Altruism

- It is possible that these two coexist as equally important reasons for intergenerational transfers (Silverstein et al. 1995; Caputo 2002; Light and McGarry 2004; Koh and MacDonald 2006; Norton and Van Houtven 2006).

# Model

$Exp\_INHERIT = f(IC, \text{number of siblings, age, marital status, education level, amount of assets, home ownership, parent's home ownership, residential area, year effect})$

$Exp\_IC = f(Exp\_BEQUEST, \text{number of children, age, marital status, education level, amount of assets, home ownership, residential area, year effect})$

# IC -> Bequest expectation?

	Not coresiding with parent(s)				Coresiding with parent(s)			
	Male		Female		Male		Female	
	OLS	IV	OLS	IV	OLS	IV	OLS	IV
Any parental care								
(1 vs. 0)	5.24	5.80	5.24	28.17*	-0.58	-4.58	2.98	5.86
(IC)	(6.48)	(14.67)	(4.21)	(11.72)	(3.07)	(3.46)	(5.79)	(7.41)

# Bequest expectation -> Informal care expectation?

	Not coresiding			
	with adult child(ren)		Coresiding with adult child(ren)	
	Male	Female	Male	Female
Expectation of leaving bequest of at least				
100 m KRW	0.45*	0.42*	0.09	0.17
<i>(Exp_BEQUEST)</i>	(0.18)	(0.17)	(0.26)	(0.23)

# Discussion

- Inequality
- Demand for elderly long-term care
  - Changes in living arrangements
- Implications for public health care financing



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