

How Does Informal Caregiving Affect Daughters' Employment and Mental Health in Japan?

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Question

Does informal caregiving by Japanese middle-aged women negatively affect their level of employment?

- Middle-aged women are considered to be reliable resources for providing informal care for elderly parents
- Studies from the US and European countries find limited effect of informal caregiving on employment probability, but moderate reduction in working hours
 - Bauer and Sousa-Poza (2015), Crespo and Mira (2014), Meng (2012), Van Houtven et al (2013), Lilly et al. (2007), etc.
- These associations are underinvestigated in Japan
 - Many data in Japan lack data on parents' survival and health

Main Findings

For middle-aged women in Japan...

Informal caregiving has little effect on labor market behavior

- Extensive margin
 - Probability of employment is reduced by 2.8% (fixed-effects)
- Intensive margin
 - No reduction in the working women's hours worked per week or days worked per week

Informal caregiving has negative effect on caregivers' mental health

Data

- Longitudinal Survey of Middle-Aged and Older Adults
 - Started in 2005 with a sample of 34,240 individuals aged 50-59
 - Initial response rate is 83.8%, with attrition rate of 1.2 - 9.8%.
- Have information on
 1. Whether parents or parents-in-law are living
 2. Whether parents or parents-in-law need care (demand for care)
 3. Whether the respondent cares for the parents
- We can therefore restrict the sample to
 - Respondents who have at least one living parent or parent-in-law
 - this sample restriction is not possible in other Japanese government data
 - Women aged 50-59
 - Waves 2008-2013

Descriptive statistics

	Non-caregiver	Caregiver	Difference
	Mean	Mean	Mean
Have a paid job	0.688	0.622	0.066 ***
Hours worked per week	33.41	31.59	1.82 ***
Days worked per week	4.84	4.69	0.14 ***
Regular worker	0.202	0.179	0.022 **
Non-regular worker	0.367	0.323	0.044 ***
Kessler 6 (range: 0-24)	9.53	10.74	-1.21 ***

Caregivers tend to

- have no paid job
- work fewer hours when they work
- report a higher Kessler Scale for Psychological Distress (K6 score)

Relationship between care demand and actual caregiving

- Having parent(s) or parent(s)-in-law who need care is positively related to a woman becoming a caregiver

	Non-caregiver		Caregiver		Difference	
	Mean	SE	Mean	SE	Mean	SE
Father needs care	0.045	0.002	0.179	0.006	-0.134	0.006 ***
Mother needs care	0.104	0.002	0.504	0.008	-0.400	0.008 ***
Father-in-law needs care	0.031	0.001	0.122	0.005	-0.091	0.005 ***
Mother-in-law needs care	0.106	0.002	0.390	0.008	-0.284	0.008 ***
Coresidence with parents	0.254	0.003	0.466	0.008	-0.212	0.009 ***

- Non-caregivers also have parents who require care
 - Caregiving is provided not only by women, but also by other family members and/or institutions
- We use demand for care as instrument for actual caregiving

Caregiving and work on the extensive margin: Employment probability

	OLS			IV		FE		
	Coef.	SE		Coef.	SE	Coef.	SE	
Caregiver	-0.053	0.012	***	-0.072	0.023	-0.028	0.009	**

- Linear probability model
 - Control for age, self-assessed health, physical functional limitations, education, marital status, # of children, child young than 18 years old, home mortgage, and year
- Instrumental Variable
 - Control for endogeneity of caregiving decision
 - Demand for care for father, mother, father-in-law, mother-in-law
 - Do not reject the hypothesis that caregiving is exogenous
- Fixed-Effects
 - Control for unobserved individual heterogeneity

Caregiving has little effect on employment probability

Caregiving and work on the intensive margin: Hours worked per week

	OLS			IV		FE	
	Coef.	SE		Coef.	SE	Coef.	SE
Caregiver	-1.939	0.454	***	-2.056	0.885	-0.208	0.326

- Linear probability model
- Instrumental Variable
 - Control for endogeneity of caregiving decision
 - Demand for care for father, mother, father-in-law, mother-in-law
 - Do not reject the hypothesis that caregiving is exogenous
- Fixed-Effects
 - Control for unobserved individual heterogeneity

Caregiving is unrelated with hours worked per week

Caregiving and work on the intensive margin: Days worked per week

Independent Variable	OLS		IV		FE	
	Coef.	SE	Coef.	SE	Coef.	SE
Caregiver	-0.120	0.041 **	-0.161	0.076 *	0.031	0.029

- Linear probability model
- Instrumental Variable
 - Control for endogeneity of caregiving decision
 - Demand for care for father, mother, father-in-law, mother-in-law
 - Do not reject the hypothesis that caregiving is exogenous
- Fixed-Effects
 - Control for unobserved individual heterogeneity

Caregiving is unrelated with days worked per week

Evidence from the JSTAR

JSTAR (Japanese Study on Aging and Retirement)

- 1st wave in 2007 in 5 cities, and now 5th wave in 10 cities
- Sample of 8,000 individuals, with a response rate of 60%
- Comparable with the Korean Longitudinal Study of Ageing (KLoSA), China Health and Retirement Longitudinal Study (CHARLS), U.S. Health and Retirement Study (HRS)

Little effect of caregiving on female employment

- Sample : Daughters who have at least one living natural parent (2009 Wave 2 and 2011 Waves 2 and 3)

	OLS		IV		FE	
	Coef.	SE	Coef.	SE	Coef.	SE
Caregiver	-0.163	0.067 **	-0.047	0.114	-0.017	0.097
N	263		263		263	

Summary of results

Little conflict between work and caregiving for middle-aged women in Japan

Only 29% of middle-aged working women work as permanent regular employees

Combination of caregiving and work on mental health

We estimate:

$$\text{Kessler 6 score} = \alpha \text{ work} + \beta \text{ caregiver} + \gamma \text{ caregiver} \times \text{work} + \text{XB}$$

- $\gamma > 0$: caregiving in combination with work **amplify** psychological distress, due to reduced leisure and personal time
- $\gamma < 0$: caregiving in combination with work **reduce** psychological distress, due to performing multiple fulfilling roles

Dependent Variable: Kessler 6 score

	OLS			FE		
	Coef.	SE		Coef.	SE	
Work	-0.363	0.102	***	-0.103	0.115	
Caregiver	1.088	0.173	***	0.692	0.150	***
Caregiver × Work	0.071	0.215		-0.133	0.172	

Work does not increase caregivers' psychological distress

Combination of caregiving and work on mental health

Does work increase psychological distress of intensive caregivers than that of non-intensive caregivers?

Sample: All caregivers

Dependent Variable: Kessler 6

	FE		
	Coef.	SE	
Work	-0.136	0.219	
Intensive Caregiver	1.144	0.299	***
Intensive Caregiver × Work	-0.169	0.410	

Intensive caregiving itself has a large negative impact on caregivers' mental health,
but work does not increase intensive caregivers' psychological distress

Conclusion

Informal parental care has little effect on work

Why?

- Japanese women with paid jobs tend to work short hours, regardless of their caregiving status.

Hours worked per week	Non-caregiver	Caregiver
Japan	33.41	31.59
US HRS	36.41 (never)	36.94 (ever)
SHARE Europe	37.89	36.52

- Women with paid jobs have jobs with limited responsibility
 - Women: 2.9% in managerial, 20.0% in clerical, 20.6% in service
 - Men: 18.4% in managerial, 8.5% in clerical, 7.5% in service

If middle-aged women were given the same opportunities to work that men enjoy, caregiving could have a large negative impact on their employment

Conclusion

Informal caregiving has negative effect on caregivers' mental health

Caregivers remain in the labor force without feeling additional psychological pressure

If middle-aged women were given the same opportunities to work that men enjoy, work can increase caregivers' psychological distress