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Retirement timing in Europe:
What difference does clustering of older workers in a dual-earner household make?

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Hanne De Preter

In cooperation with Dorien Van Looy & Dimitri Mortelmans

Universiteit Antwerpen

1. Theoretical background

- **Pervasive male bias in retirement analysis**
  1. Retirement as a male event
     - Criticism due to rising female employment
  2. Shift to individual male and female life courses
     - Failure to acknowledge linked lives
  3. The couple as obvious unit of analysis
     - Increasing number of dual-earner couples

2. Research question

The retirement decision is taken within a family system

(Loretto & Vickerstaff, 2012)

Does ignoring the clustering of individuals into a household context affect the influence of retirement predictors?

3. Data

- **Sample**
  - SHARE – First and second wave
  - Men and women aged 50 years or older
  - Part of a heterosexual married or cohabiting couple
  - Employed by an employer
    - Inactive people and self-employed excluded
  - Both respondent and partner are part of the sample

	N	%
Sample size	930	
Events	77	8.3

Respondent-partner dyads
465 dual-earner heterosexual couples

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3. Data

1. DEPENDENT
   - Retirement event (based on ep005)

2. CONTROL
   - Gender
   - Educational level (ISCED 1-2= low; 3-4= medium; 5-6= high)
   - Country of residence

3. RESPONDENT AND PARTNER CHARACTERISTICS
   - Long-term illness (ph004)
   - Working fulltime (ep012 > 30)
     - OECD threshold of 30 standard working hours per week
   - Volunteer work (ac002d1)
   - Care task (sp018)

3. Data

4. HOUSEHOLD CHARACTERISTICS
   - Age gap between partners
     - Respondent is older than the partner
     - Respondent and partner are of the same age
     - Partner is older than the respondent (reference category)
   - Household size (hhsize)
   - Household income (hgtincv/ sqrt(hhsize))
     - Square Root Equivalence Scale

4. Method

1. **Cox Model**
   - Discrete-time proportional hazard method
   - Observations from different subjects are statistically independent of each other

2. **Shared Frailty Analysis**
   - The failure times for observations from the same cluster correlate with one another
     - Allows the inclusion of correlated observations into proportional hazard models

5. Results

Control Variables

	Cox Model		Shared Frailty model	
Measures	**Hazard Ratio**	**CI**	**Hazard Ratio**	**CI**
Gender (men)	0.726	0.397-1.327	0.704	0.387-1.281
Medium education level (ISCED 3-4)	0.558*	0.316-0.684	0.560*	0.319-0.982
High education level (ISCED 5-6)	0.594	0.309-1.141	0.583	0.305-1.117

5. Results

Respondent characteristics

	Cox Model		Shared Frailty model	
Measures	**Hazard Ratio**	**CI**	**Hazard Ratio**	**CI**
Respondent				
Long-term illness	0.845	0.517-1.380	0.872	0.535-1.421
Volunteer work	1.926*	1.067-3.472	1.759	0.980-3.159
Care task in the household	1.650	0.388-7.006	1.229	0.232-6.503
Working fulltime	1.183	0.559-2.502	1.201	0.568-2.536

5. Results

Partner characteristics

	Cox Model		Shared Frailty model	
Measures	**Hazard Ratio**	**CI**	**Hazard Ratio**	**CI**
Partner				
Long-term illness	1.159	0.723-1.856	1.167	0.729-1.868
Volunteer work	0.884	0.460-1.700	0.919	0.484-1.746
Care task in the household	3.183*	1.207-8.392	2.268	0.747-6.888
Working fulltime	1.311	0.705-2.439	1.252	0.675-2.321

5. Results

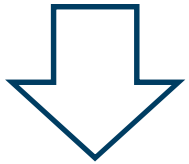
Household characteristics

	Cox Model		Shared Frailty model	
Measures	**Hazard Ratio**	**CI**	**Hazard Ratio**	**CI**
Household				
Age gap				
Respondent is older	2.093*	1.130-3.876	1.914*	1.048-3.497
Equal Age	2.120*	1.001-4.492	1.879	0.884-3.994
Household size	0.508**	0.333-0.776	0.601**	0.405-0.893
Household income	0.957	0.871-1.051	0.956	0.870-1.050

6. Conclusion

- **Cox models are biased**
  - Violation of the statistical assumption of independence
  - Men and women living in the same household are not independent of each other

Ignoring the clustering factor in the survival of couples leads to small standard errors and therefore falsely significant estimates



Analysis should allow for correlation in the survival experiences of couples

7. Limitations

- Families link lives far beyond the nuclear unit
  - Multigenerational bonds neglected
- Differences between dual-earner households neglected
  - Variety of strategies for arranging work and family tasks
- Nature of the sample population
  - Select group of survivors where neither spouse retired, was a homemaker, died or left the labour market
- National differences
  - Weak-strong family / North- South dichotomy

➔ Further research is needed!

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