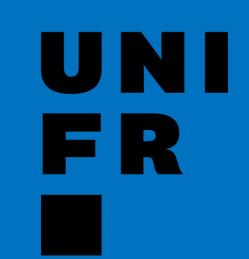


Sequence analysis in life course epidemiology: Employment trajectories and cancer in women



Bernadette W.A. van der Linden¹, Stefan Sieber², Rainer Gabriel³, Matthias Studer⁴,
Arnaud Chiolero^{1,5}, Stéphane Cullati¹

¹ Population Health Laboratory, University of Fribourg, 1700 Fribourg, Switzerland; ² Barcelona Institute for Global Health (ISGlobal), Spain; ³ Institute of Diversity and Social Integration, Zurich University of Applied Sciences, Switzerland; ⁴ LIVES Centre and Institute of Demographics and Socioeconomics, University of Geneva, Switzerland; ⁵ School of Population and Global Health, McGill University, Canada

BACKGROUND

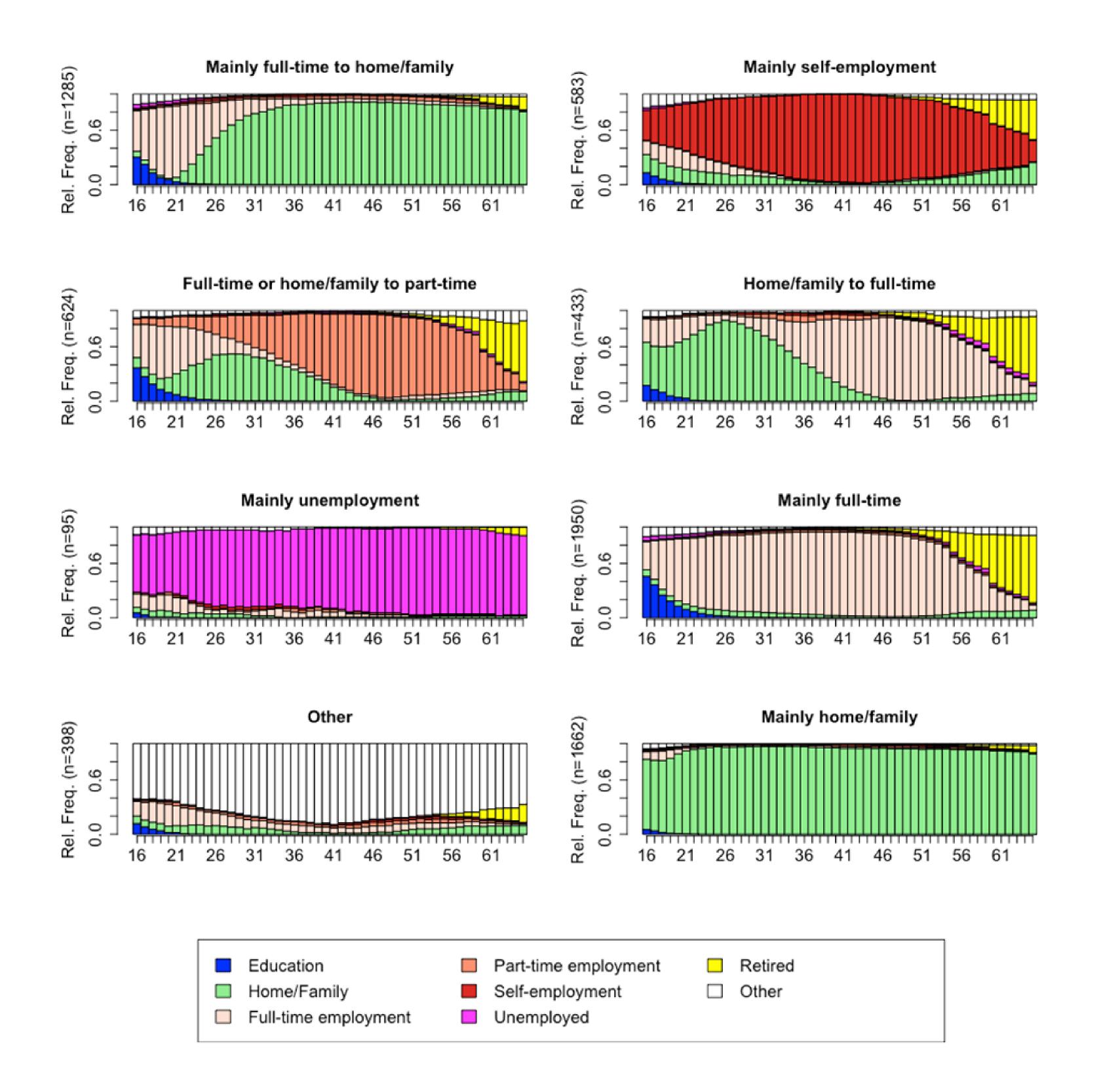
- Life course theory and accumulation of dis/advantage: timing, sequence, context of events and experiences over one's life course shape trajectories and influence health (Dannefer, 2003)
- We spend a large portion of our lives at work and working conditions and lifetime exposure to work affect later life health (Lu et al., 2017; Nilsen et al., 2019)
- Cancer: long latency period
 - Lifestyle behaviors, socioeconomic conditions, occupation: exposures, stressful conditions,...
 - Timing and sequence of events (sensitive period) + accumulation

OBJECTIVE

To assess how employment trajectories predict cancer onset in later life among women.

METHODS

- Survey of Health, Ageing and Retirement in Europe (SHARE), 2004-2020: 6809 women, mean age 70 years (55-99), from 14 European countries.
- Life calendar on past employment life (16-65 years) → sequence analysis
- Cancer: self-reported overall and breast cancer
- Logistic regression
 - adjusted for age, birth cohort, attrition, body mass index, smoking, multimorbidity, and physical activity



RESULTS

- Risk of all types of cancer (N=781) compared to women in the 'Mainly home/family' trajectory higher in:
- Mainly full-time to home/family: OR 1.51 (95% CI 1.19-1.93)
- Mainly full-time: 1.73 (1.40-2.16)
- Full-time or home/family to part-time: 2.28 (1.70-3.05)
- Other: 1.47 (1.02-2.09)
- For **breast** cancer (N=353), results were similar

KEY MESSAGES

- Women's **employment trajectories** associated with **cancer risk** in later life
- The domestic and family work trajectory is associated with the lowest risk
- Fulltime work trajectories associated with highest risk
- Potential explanations: occupational health risks? Health-related lifestyle?

