Family life trajectories to living alone in later life: A comparative analysis of 28 European countries

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EXTENDED ABSTRACT

Introduction

Over the past decades, the prevalence of living alone among older adults has witnessed a considerable rise, particularly in developed countries (Reher & Requena, 2018). This phenomenon is closely intertwined with the overarching trend of population ageing, where longer life expectancies intersect with changes in family structures. Existing research has elucidated several aspects of this trend. Notably, we have learned that women tend to live alone more frequently in old age (Requena et al, 2019) and that this proportion continues to increase with age (Gaymu et al, 2006). Also, there are compelling connections between the propensity to live alone and both higher partnership instability and lower fertility rates (Brown & Lin, 2012). In many developed countries, persistently low fertility rates, particularly prominent in regions with strong family structures in Eastern and Southern Europe, have coincided with a rise in solo living and childlessness. A study by Reher and Requena (2017) found a clear relationship between completed fertility and living alone among elderly women in Spain. Comparative research, such as the study by Koropecckyj-Cox and Call (2007), has indicated a potentially causal relationship between childlessness and living alone among the elderly. Previous studies have shed light on several determinants of living alone in later life, including the influence of gender and education (Gaymu et al, 2006). Older people with higher levels of education tend to live alone more frequently than those with lower levels of education. This finding is consistent with recent studies showing that highly educated people may be more likely to live alone due to higher probabilities of divorce, lower fertility, or simply preference (Reher & Requena, 2018; Requena et al, 2019).

In understanding the factors contributing to the growing prevalence of living alone across European countries, the second demographic transition theory (Lesthaeghe, 1995) serves as a valuable framework for analysing commonalities and disparities among countries. The theory anticipates shifts in demographic behaviour driven by the dissemination of individualistic values, leading to weaker family bonds. These ideational shifts typically manifest as heightened partnership instability, increased rates of divorce and separation, reduced fertility, more intricate household arrangements, and a surge in living alone (Lesthaeghe, 1995). Consistent with the second demographic transition theory, it is reasonable to anticipate that individuals with higher levels of education will play a pioneering role in adopting these individualistic values, with a specific emphasis on highly educated women (Esping-Andersen, 2016).

Living alone in later life can thus be viewed as a reflection of choices (e.g., about marriage and parenthood) made in early life and midlife. However, our understanding of life course pathways to living alone in later life remains limited, especially in a comparative setting (Esteve et al, 2020). To try fill this gap, this paper focuses on partnership and parenthood biographies of older adults living alone in 28 European countries. Our main goal is to identify and describe clusters of similar family life trajectories of older Europeans living alone. In addition, we seek to investigate how gender and education jointly influence cluster membership, with specific attention to variations across European welfare regimes. The following research questions will guide the analysis:

1) What are the typical family life trajectories to living alone in later life?
2) How do pathways to living alone in later life differ by gender and education?
3) To what extent do family life courses of older Europeans living alone vary across institutional contexts?

Data and methods

Our analysis will draw data from the Survey of Health, Ageing and Retirement in Europe (SHARE), a cross-national, multidisciplinary panel study that focuses on health, socioeconomics, and the family and social networks of persons aged 50+. To reconstruct family life courses between ages 18 and 49, we will employ the SHARE Job Episodes Panel (JEP; Brugiavini et al, 2022), a generated dataset based on retrospective information collected in Wave 3 (Börsch-Supan, 2022a) and Wave 7 (Börsch-Supan, 2022b) of SHARE. The JEP comes in a long format and includes an indicator of the partnership and parenthood status for each SHARE respondent throughout his or her life.

We will apply sequence and cluster analysis to identify typical clusters of family life courses among SHARE respondents living alone. We will estimate a multinomial logistic regression model to predict cluster membership by gender and education, and to examine differences between European welfare regimes.

For our preliminary analysis, we derived a sample of 18,962 SHARE respondents who, at the time of the interview in Wave 3 or Wave 7, were living alone. For every SHARE respondent in the sample, we considered the following family states at each age between 18 and 49: (1) no partner, (2) no partner, child(ren), (3) cohabiting, (4)

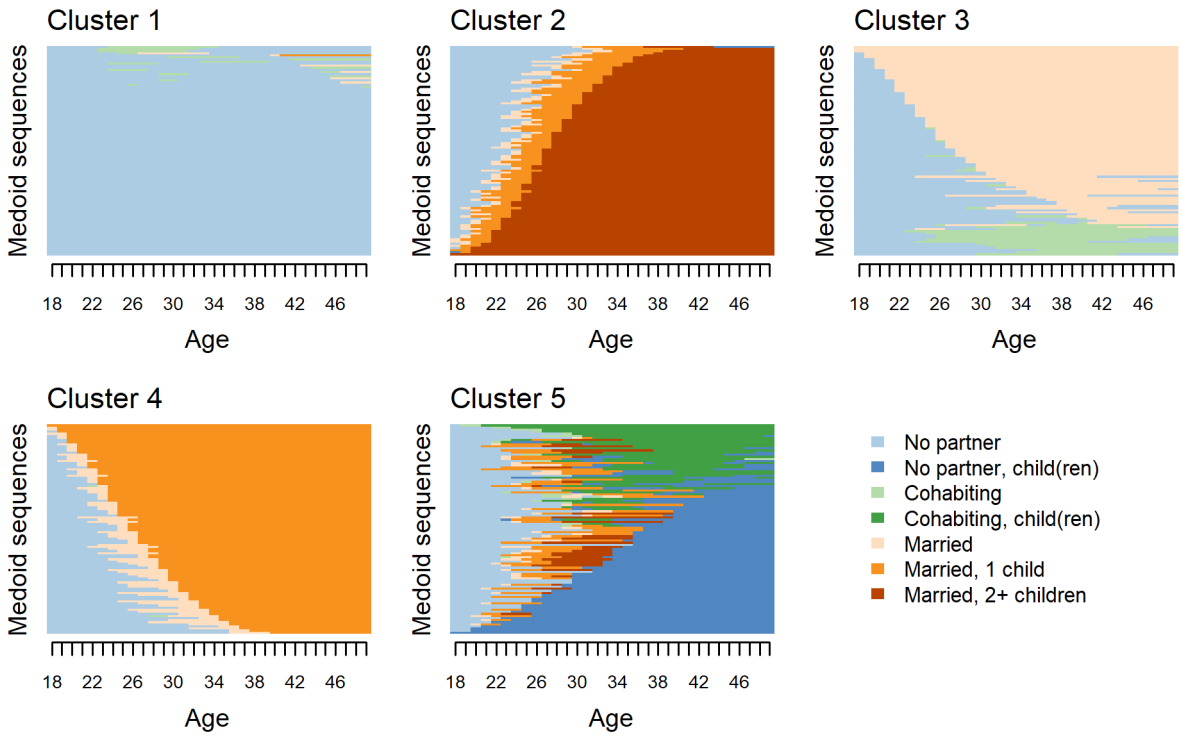
cohabiting, child(ren), (5) married, (6) married, 1 child, and (7) married, 2+ children. We performed optimal matching (OM) with constant substitution costs of 2 and insertion/deletion costs of 1. We followed with a hierarchical cluster analysis based on Ward's linkage procedure to identify typical family life trajectories. We retained five clusters as the best solution. Our choice was supported by well-established cluster cut-off criteria. We visualised the clusters with relative frequency (RF) sequence plots. Finally, we evaluated the differences between the clusters in terms of sociodemographic (gender, years spent in fulltime education) and country indicators descriptively and by means of multinomial logistic regression. Note that we categorized the 28 European countries in the sample based on their welfare regimes, distinguishing between: (1) Social Democratic, (2) Liberal, (3) Conservative, (4) Southern European, (5) Baltic, and (6) Central and Eastern European.

Preliminary findings

In this section, we will discuss our initial or preliminary findings, which serve as the foundation for further investigation. Figure 1 shows the five clusters of typical family life trajectories that were identified among older Europeans living alone. Demographic pathways to living alone in later life are clearly heterogeneous. Based on the observed patterns, we use descriptive labels that convey the essence of each cluster. The five clusters represent the following family life course types:

- Cluster 1: *predominantly never partnered and childless*. This cluster accounts for 14.1% of the SHARE respondents in our sample. It is characterised by long spells of singleness and, for most cases, a complete lack of any family events by the age of 50.
- Cluster 2: *married with 2+ children*. By far the largest cluster (52.5% of the sample). Seems to correspond to the "traditional" family pathway of getting married and having at least two children over the life course, with extramarital cohabitation generally absent.
- Cluster 3: *partnered childless*. SHARE respondents in this cluster enter marriage or cohabitation but do not become parents. This is the smallest cluster, representing about 8.5% of the sample.
- Cluster 4: *married with 1 child*. This cluster (14.2% of the sample) includes married parents who do not progress to a second child.
- Cluster 5: *partnerless parents*. The most diverse cluster. It is composed of single parents and persons who cohabit or marry and have children, but subsequently become unpartnered or enter a postmarital cohabitation. This cluster comprises 10.8% of the sample.

Figure 1. RF sequence plots of five clusters of family life trajectories to living alone in later life (k = 100 frequency groups).



In Table 1, we provide a provisional description of the five pathways to living alone with respect to age, gender, years of fulltime education, and welfare regime. The *predominantly never partnered and childless* cluster (Cluster

1) is the only male-dominated cluster. The ever-married clusters (Cluster 2, Cluster 3, and Cluster 4) exhibit the highest mean age (and sizeable proportions of respondents whose last partner died; not shown in Table 1). The group of *partnerless parents* (Cluster 5) has, on average, the highest number of years of fulltime education, and appears to have the highest degree of partnership instability. We also observe significant differences in family dynamics across institutional contexts.

Table 1. Description of five clusters of family life trajectories to living alone in later life with respect to age, gender, years of fulltime education, and welfare regime.

	Cluster 1	**Cluster 2**	**Cluster 3**	**Cluster 4**	**Cluster 5**
Respondents	2,669	9,950	1,603	2,689	2,051
Distribution (%)	14.08	52.47	8.45	14.18	10.82
Age (mean)	67.53	73.38	72.00	73.52	65.99
Gender (%)					
Males	50.62	23.27	32.63	25.10	27.99
Females	49.38	76.73	67.37	74.90	72.01
Years of education (mean)	13.94	12.75	13.09	13.30	14.52
Welfare regime (%)					
Social Democratic	11.13	12.49	10.48	7.81	20.14
Liberal	6.89	4.94	6.61	3.24	2.05
Conservative	30.20	27.20	33.19	30.46	29.06
Southern European	24.09	15.39	19.65	14.99	6.53
Baltic	17.95	25.64	18.84	25.51	20.84
Central and Eastern European	9.74	14.34	11.23	18.00	21.94

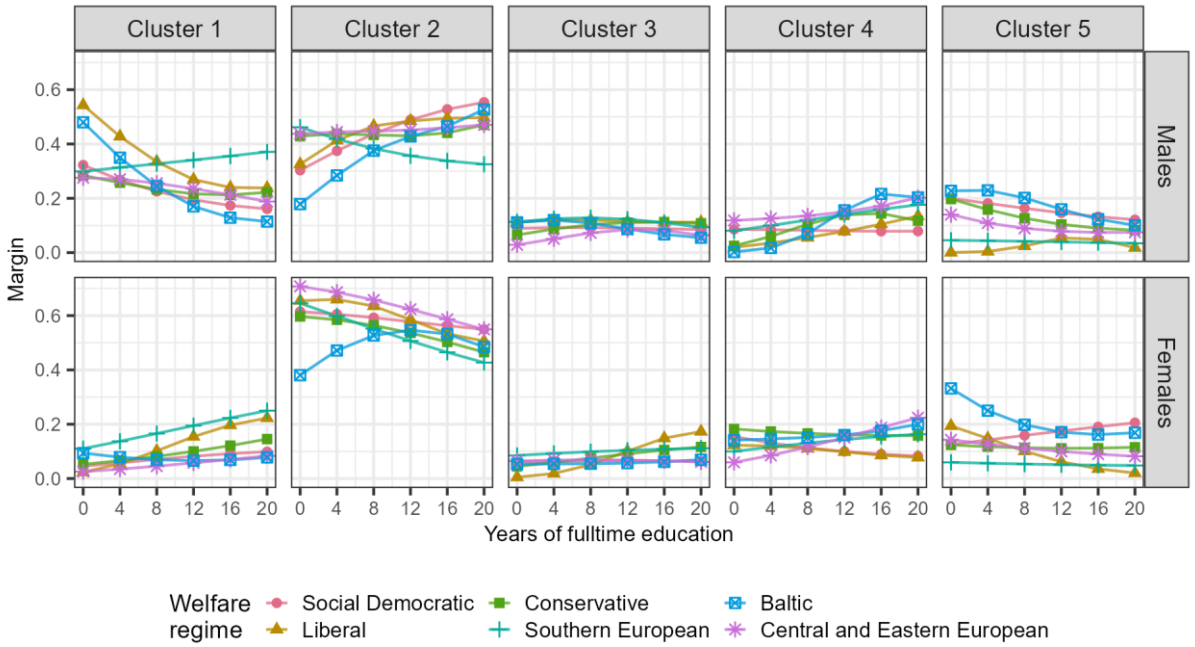
In the next step, we estimate a multinomial logistic regression model to assess how gender and education affect cluster membership across European welfare regimes. Our model controls for age (and age squared) and includes a three-way interaction between gender, education, and the country grouping. To facilitate interpretation, we report average marginal effects (Table 2) and plot predicted probabilities by gender, education, and welfare regime for each cluster of family life trajectories to living alone in later life (Figure 2).

Table 2. Average marginal effects of gender, education, and welfare regime on cluster membership. Estimates based on a multinomial logistic regression model controlling for age (and age squared). Shaded in grey are differences not significant at the 0.05 level.

	Cluster 1	**Cluster 2**	**Cluster 3**	**Cluster 4**	**Cluster 5**
Gender					
Males	Ref.	Ref.	Ref.	Ref.	Ref.
Females	-0.126	0.107	-0.015	0.013	0.022
Years of education	0.002	-0.005	0.001	0.003	-0.001
Welfare regime					
Social Democratic	Ref.	Ref.	Ref.	Ref.	Ref.
Liberal	0.079	0.002	0.035	-0.001	-0.115
Conservative	0.028	-0.050	0.024	0.055	-0.058
Southern European	0.130	-0.091	0.035	0.047	-0.120
Baltic	-0.005	0.020	-0.003	0.063	-0.075
Central and Eastern European	-0.012	-0.052	-0.006	0.067	0.003

The results indicate that the probability of being in each cluster varies considerably by gender and education, and across European welfare regimes. Moreover, the educational effects are gender-specific, and their joint influence on sorting into each cluster differs across institutional contexts. For example, for older males living alone, the probability of sorting into the *predominantly never partnered and childless* cluster (Cluster 1) is generally higher (Table 2) and increases with education, albeit with varying degrees across country groupings (and with the notable exception of Southern Europe; Figure 2). The opposite seems to hold for older females living alone, yet again with varying degrees across country groupings. We further observe that the probability of sorting into the "traditional" life course pattern of *married with 2+ children* (Cluster 2) is higher for females and generally decreases with education (Table 2). However, the educational gradient of sorting into Cluster 2 is positive for males in most country groupings (Figure 2). More educated women are overall more likely to sort into *partnered childlessness* (Cluster 3), particularly in the Liberal welfare regime, and into the *married with 1 child* cluster (Cluster 4), but the latter relationship varies substantially across country groupings, from positive (Baltic, Central and Eastern European, Southern European) to negative (Conservative, Liberal, Social Democratic). The probability of sorting into *partnerless parents* (Cluster 5) decreases with education for both males and females, but there are non-negligible cross-national differences in the strength and direction of this association.

Figure 2. Predicted probabilities of cluster membership by gender, education, and welfare regime. Estimates based on a multinomial logistic regression model controlling for age (and age squared).



Further steps

We will build upon these preliminary findings by thoroughly reassessing our analytical decisions to ensure their robustness and validity. Our next focus will be on a comprehensive interpretation and discussion of the results, placing them within the broader context of existing literature. This critical examination will allow us to explore the implications of our findings, delve into the factors contributing to the observed variations across countries, and further refine our understanding of the complex interplay between gender, education, and family life trajectories among older Europeans living alone.

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