Geographical mobility among older people and their adult children in Sweden: the role of parents' health issues and family ties

Introduction

Nowadays, many societies are dealing with an increasing share of older men and women along with their increasing need for personal and practical support. Age-related vulnerabilities and health problems can motivate people to turn to public services or kin support networks for assistance. Although caring for relatives is not a legal obligation in many European countries and the state usually takes this responsibility, the family remains an important source of support for older people (Künemund & Rein, 1999). The availability, regularity, and amount of this support is facilitated by geographical proximity between family members (Dewit, Wister, & Burch, 1988; Hank & Buber, 2009; Lawton, Silverstein, & Bengtson, 1994; Litwak & Kulis, 1987). Current population ageing and welfare-state retrenchment might increase the dependence of older parents on their adult children, especially daughters who are more likely to be in contact with elderly parents at later stages of their lives (Grigoryeva, 2017; Lennartsson, Silverstein, & Fritzell, 2010). Parents who live close to their children can usually rely on them, while long distances might motivate parents and/or children to move closer to each other. Another option for older parents dealing with health problems is to utilize support from the state or private market, including institutionalized residential care.

Previous studies point to associations between parents' and their adult children's life course events and related support needs, on one hand, and the likelihood of intergenerational proximity-enhancing moves, on the other hand. In Norway, the propensity to migrate toward family increased with matrimonial separation, widowhood, and childbirth (Thomas & Dommermuth, 2019). In the United States, older people with limitations in activities of daily living (ADLs) and those who experienced marital disruptions were more likely to move closer to their children (Zhang, Engelman, & Agree, 2013). In Sweden, moving very close to adult children was more common among the young-old and less common among the old-old who instead, according to the authors' speculations, might consider moving to institutionalized care or other supporting housing (Pettersson & Malmberg, 2009). Swedish adult children, in turn, were more likely to move closer to parents who were younger than 79 years old relative to oldest-old ones, potentially suggesting that the responsibility for taking care of frail relatives was not the primary reason for these proximity-enhancing moves. In the Netherlands, cross-sectional analysis of the transition to coresidence showed that the needs of adult children seemed to be more important in relocation considerations than those of parents, at least when parents belonged to the group of the young-old (Smits, Van Gaalen, & Mulder, 2010).

Some suggest that the clustering of family members reinforces their attracting and deterring effects for migration. In both Sweden and Norway, a positive relationship between moves towards family and the location of other family members (e.g. other children, siblings, grandchildren) was found (Pettersson & Malmberg, 2009; Thomas & Dommermuth, 2019). At the same time, for both generations, living near family members had a strong migration deterring effect that reduced the likelihood of intergenerational proximity-decreasing moves in Norway (Thomas & Dommermuth, 2019) and Britain (Ermisch & Mulder, Online first).

Previous studies have considered the roles of parents' and children's needs and location of other family members in relocation behaviour of parents and their adult children separately. However, it is still not clear how parents and their distant children respond to parents' need for care at the final stage of parents' lives when their health deteriorates and they transition to dependency. Therefore, the central questions of this study are: *How do parents' relocations close to adult children who live far away, into institutionalized residential care, or having distant children moving nearby relate to parents' health problems in later life? How are these relocations patterned by adult children's gender and location?*

Drawing on (i) Lin and Rogerson's (1995) model of intergenerational proximity and life-cycle mobility that complements the well-established model of Litwak and Longino (1987), (ii) the family ties perspective on internal migration recently introduced by Mulder (2018), and (iii) a number of empirical studies on the dynamics of intergenerational geographical proximity (for example, Choi, Schoeni, Langa, & Heisler, 2014; Choi, 1996; Silverstein & Angelelli, 1998; Smits, 2010), we hypothesise the following:

- When parents' health deteriorates, they will be more likely to relocate closer to a child, or have a child moving closer than when they are in better health (*Hypothesis 1a*) but the effect of health issues will be stronger for moving closer to a child than having a child moving closer (*Hypothesis 1b*);

- The effect of closeness to death will be stronger on relocation to institutionalized care than on intergenerational proximity-enhancing moves (*Hypothesis 1c*);
- The propensity to migrate towards daughters will be greater than the propensity to move towards sons (*Hypothesis 2a*) and the propensity to have daughters moving closer will be greater than the propensity to have sons moving closer (*Hypothesis 2b);*
- Older people who have other children living nearby will be less likely to move toward distant children or to be institutionalized than those who do not have other children in close proximity (*Hypothesis 3a*);
- Having other children nearby will be positively associated with the likelihood of having the distant child moving closer (*Hypothesis 3b*);
- Older people who have at least two distant children clustered in one location will be more likely to move closer to them than those who have a distant child with no siblings nearby (*Hypothesis 4*).

Data and methods

To address our research questions, multinomial logistic regression models were performed on population register data from Sweden for the period of 2013-2017. The data selection for this study includes all non-institutionalized parents at the age of 80 years and older and their adult children who lived at least 20 km away in the baseline years. Older people who did not have children and those whose children lived outside Sweden were excluded from the study. We observed mother-child and father-child dyads that represented the units of analysis across three pooled time periods: 2013 (t-1) – 2014 (t) – 2015 (t+1), 2014 (t-1) – 2015 (t) – 2016 (t+1), and 2015 (t-1) – 2016 (t) – 2017 (t+1). At t-1 we measured baseline characteristics of the study population. We analysed relocations between ends of several pairs of years t-1 and t. t+1 was required to compute the variable "closeness to death" at t.

Our dependent variable consisted of eight categories: no relocation between t-1 and t(reference category); an older parent relocates within 10 km of a child; a child relocates within 10 km of an older parent; both move and end up within 10 km of each other; relocation of an older parent to a residential care institution; older parent relocates but the parent-child distance remains longer than 10 km (relocation elsewhere); a child relocates but the parent-child distance remains longer than 10 km, both relocate and do not end up within 10 km of each other.

Our main explanatory variables were indicators of parents' health problems in old age and family ties of parents and their distant children. For the purpose of this study, closeness to death served as a proxy for severe health problems because of the absence of other health measures and distinguished between two categories: did not die within 2 years (reference category) and died within 2 years. Older parents' family ties included three categories: no children within 10 km (reference category), at least one child in the same household or neighbourhood, at least one child within 10 km of the neighbourhood. Distant children's family ties were operationalised as having at least one sibling within 10 km or not (the reference category).

Our control variables in the baseline year included parents' and children's local ties: duration of residence, presence of other family member(s) in the household. We also control for the degree of urbanization of parents' and children's places of residence and their socioeconomic conditions.

Preliminary results

The analytic sample consisted of 168,108 person-years for older women and 124,314 person-years for older men. For more than 90 per cent of parent-child dyads, the intergenerational geographical proximity did not change between 2013 and 2016. Nearly 1.4 per cent of older mothers and their distant children (1.31 per cent of older fathers and distant children) relocated into closer proximity between three pooled time periods of observation. Approximately 60 per cent of all proximity-enhancing moves were made by adult children.

Table 1 in Appendix presents the results for older mothers with control variables included in the model but not shown. The preliminary analyses indicated that with some exceptions, the main explanatory variables showed results consistent with our hypotheses. Whereas closeness to death raised the probability of parental relocations closer to distant children or to institutions, it did not influence children's moves towards parents. The effect of closeness to death was, indeed, stronger on relocation to institutionalized care than on

intergenerational proximity-enhancing moves. Mothers were more likely to move towards daughters than towards sons but the association between having a distant child moving closer and the gender of this child was not found. Older parents who had other children living nearby were less likely to move toward distant children or to be institutionalized than those who did not have other children in close proximity. Children moved closer to parents if there was at least one sibling around a parent or in response to their own life circumstances (for instance, unemployment, low income, no partner, or no children). Older people who had at least two distant children clustered in one location were more likely to move closer to them than those who had a distant child with no siblings nearby. The effect of geographical proximity to a sibling on the lower propensity of relocation was not found.

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Appendix. Table 1: Multinomial logistic regression results (ref: No migration)

	Parent moves closer to a child		Child moves closer to a parent		Parent moves to institution		Parent moves elsewhere		Child moves elsewhere	
	B	**SE**	**B**	**SE**	**B**	**SE**	**B**	**SE**	**B**	**SE**
Closeness to death (ref: did not die within 2 years)										
Died within 2 years	**0.262†**	0.148	-0.012	0.102	**1.086*** **	0.037	**0.456*** **	0.092	0.072	0.062
Parent's family ties (ref: no children within 10km)										
Closest child co-residing or in the same neighbourhood	**-1.329*** **	0.169	**0.235** **	0.072	**-0.369*** **	0.049	**-0.345*** **	0.083	0.048	0.048
Closest child within 10 km of the neighbourhood	**-1.778*** **	0.147	**0.156** **	0.064	**0.065†**	0.036	**-1.126*** **	0.094	-0.021	0.040
Child's family ties (ref: no siblings within 10km)										
At least one sibling within 10km	**0.251***	0.128	0.066	0.096	0.054	0.046	**0.309*** **	0.089	**0.139***	0.058
Child's gender (ref: son)										
Daughter	**0.215** **	0.071	0.024	0.055	**0.048†**	0.028	0.014	0.054	**-0.065†**	0.035

†p ‹ 0.10; *p ‹ 0.05; **p ‹ 0.01; ***p ‹ 0.001.

Note: we controlled for *local ties* of the target population*:* duration of residence, the size of the dwelling, presence of a partner in the household for older parents and employment status, duration of residence, the size of the dwelling, presence of a partner and dependent children in the household for distant children*; their sociodemographic characteristics:* age, educational attainment, income from pension, migration background for older parents and age, educational attainment, employment status, disposable income for distant children*; and the level of urbanization of parents' and children's municipalities of residence.*

Source: Swedish register data, authors' calculations.