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Original Article

Does Gender Top Family Ties? Within-Couple and between-Sibling Sharing of Elderly Care

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Abstract

Most elderly care continues to be delivered informally within families. Yet we still lack a thorough understanding of how care responsibilities are shared across both family ties and generations. We explore the gender dimension of caregiving in the distribution of elderly care between couple members (care provided to parents and parents-in-law and to children or grandchildren) and its associations with siblings' sex composition in a range of European countries. Using SHARE data and multinomial multilevel models, we test how responsibility for elderly care is shared across children and mediated by their partners and their siblings' sex composition as well as how it is combined with other downward care responsibilities, towards children and grandchildren. Results confirm the very gendered nature of elderly care. But who do men shift elderly care responsibilities to? We find that elderly care is more likely shifted to sisters than brothers, especially when caregiving becomes intense. We also find that the lower contribution by sons does not seem to prompt transfers of care responsibilities to their female partners within couples. Finally, although upward and downward caring responsibilities might compete, we find that individuals who are more inclined to provide care tend to do so in both directions.

Introduction

Within studies of gender, the division in informal caring work within the household is a consolidated field. At the same time, demographic and social changes have made elderly care an important area of research. Population aging, decreased fertility, shrinking family sizes, and increased female labour market participation have radically widened the gap between demand and supply for family-based elderly care in all advanced countries. Still, most elderly care provision continues to be delivered informally within families (Folbre and Bittman, 2004; Saraceno, 2008; Henz, 2009, 2010). Despite increasing recent attention to the role of adults outside the couple dyad (Lee, Spitze and Logan, 2003; Henz, 2009; Grigoryeva, 2017), we lack a thorough understanding of how caring responsibilities are shared across both family's ties (siblings and partners) and generations, especially when caregiving demands intensify.

In a demographic context of increasing verticalization of families—meaning reducing number of horizontal ties (siblings) and increasing of vertical ones (parents, children, and grandchildren)—and longer employment participation, the question of how limited resources are allocated by couples when faced with varying patterns of parental need and conflicting downward caregiving

demands has not yet been addressed. This article contributes to the understanding of family caregiving allocation across generations. We focus especially on parental care (leaving downward care as competing demand) since in the coming decades upward caregiving is expected to become a higher stressor for family resources. Between 2015 and 2060, in EU27, the incidence of the population aged 80 years and over on the total population is expected to growth from 5.5 per cent to 12.9 per cent (European Commission, 2018). This article addresses in particular the gender division in elderly care within families and between family members in a context of multiple intergenerational relationships. It explores the gendered dimension of caregiving in its distribution across the two potential (and usually hierarchic) negotiations in the division of parental care responsibility, between siblings and couple members (including care provided to parents and parents-in-law as well as to children or, more often, grandchildren).

Kin relationships substantially shape adult parental care, with both wives and husbands providing more care to their own parents than to their parents-in-law. However, previous research suggests that support is also offered along non-consanguineal ties (Henz, 2009). Sibship size and gender composition influence how parental care is distributed, pointing to the relevance of intra-family sharing mechanisms (Grigoryeva, 2017). The greater unpredictability of elderly care compared with childrearing further calls the family dimension into question. When care needs arise, the responsibility often initially falls on the elderly person's partner. But when partners are unavailable or unable to provide the high levels of care that may be necessary, the responsibility often cascades down to adult children and their families (Szinovacz and Davey, 2008; Grigoryeva, 2017). This calls for a shift in focus in the analysis of care relationships from single individuals across households to couples and families more broadly (Lee, Spitze and Logan, 2003; Chesley and Poppie, 2009; Henz, 2010; Hagestad and Dykstra, 2016).

Adult parental care is increasingly landing on the shoulders of the growing share of people in three- and four-generation families—i.e. the 'sandwich generation' (Bengtson, Rosenthal and Burton, 1990; Bengtson *et al.*, 2003; Harper, 2003; Véron *et al.*, 2007)—who may also have care responsibilities for their (grand)children at the same time. The bidirectional nature of care responsibilities (Grundy and Henretta, 2006; Hagestad, 2006; Saraceno, 2010; Vlachantoni *et al.*, 2019) for both younger and older generations calls for a larger focus on family composition.

Given the strongly gendered expectations regarding care provision (Henz, 2009, 2010; Grigoryeva, 2017) and increased pressure to care in both directions—upward and downward (Vlachantoni *et al.*, 2019)—we ask who makes up for men's lower investments in informal elderly care provision. How do siblings' sex composition and partners affect care distribution across family members? We also investigate whether elderly care responsibilities (what we term 'upward care provision') directly compete with demands from younger generations, i.e. those from children and grandchildren (what we term 'downward care provision'). Our contribution simultaneously integrates the following three dimensions: (i) the distribution of elderly care between genders within couples; (ii) the role of siblings' gender composition; and (iii) the association between downward and upward care responsibilities. Further, by focusing on the intensity of caregiving provided, we also assess whether the gendered nature of care sharing mechanisms differs according to caring frequency.

The article first discusses the theories around the gendered nature of care exchange in intergenerational analyses. It then explores previous findings on the association between individual and family characteristics and the care relationships between children and their parents, also in light of institutional features. The last two sections present the multinomial multilevel models used in our empirical analysis on seven countries—Denmark, France, Belgium, Italy, the Netherlands, Spain, and Sweden—and discuss the results obtained.

Gendered Care Relations: Caring Intensity and Distribution across Family Bonds

Previous research has shown how the decisions to care for elderly parents emerge from complex negotiations among children, their siblings and spouses, reaching beyond elderly's household to involve the larger family (Szinovacz and Davey, 2008). Research on relationships between parents and their adult children has investigated how caring responsibilities and duties are shared within families, especially between children and their spouses/partners (Gerstel and Gallagher, 1994; Penrod *et al.*, 1995; Cancian and Oliker, 2000; Szinovacz and Davey, 2008).

The gender differences already acknowledged in informal caregiving reflect women's socialization to perform nurturing and kin-keeping roles (West and Zimmerman, 2009). Daughters are involved in caring for their parents more often than sons, they more often become their parents' primary caregivers, and they are more likely to take up more intensive caring activities (Horowitz, 1985; Tennstedt *et al.*, 1989; Spitze and Logan, 1990). Whereas parental support is more prevalent among consanguinal kin—with a marked matrilineal orientation—

(Henz, 2009; Grigoryeva, 2017) and less often transferred to children-in-law (Kivett 1985; Litwak 1985), studies on care sharing mechanisms between sons-in-law and daughters-in-law provide contrasting results. Some previous research points to no or little gender difference in the amount of help sons-in-law and daughters-in-law offer to their parents-in-law (Ingersoll-Dayton, Starrels and Dowler, 1996; Shuey and Hardy, 2003). Contrarily, other studies on the United States and the United Kingdom point to gender differences in care intensity, suggesting that, once involved, daughters-in-law tend to engage in more intensive caregiving (Gerstel and Gallagher, 2001; Lee, Spitze and Logan, 2003; Henz, 2009).

Gendered caregiving, with a heavier load for women, is not related only to traditional gender norms. Cross-sex personal care, especially involving intimate tasks (Arber and Ginn, 1995), may trigger inhibitions due to an opposite-sex taboo (Matthews, 2002), promoting a preference for same-sex support, especially for mothers, who might resist receiving care from their sons (Lee, Spitze and Logan, 2003; Szinovacz and Davey, 2008). Given the higher acceptance of women as 'natural carers', norms inhibiting cross-sex care suggest a higher acceptance for women providing than receiving cross-sex care (see Szinovacz and Davey, 2008). This adds to women's higher life expectancy (and thus their longer availability as caregiver and care recipient) making for a higher prevalence of women among carers for the opposite sex than among men. Following the expectations derived from a long-practised traditional gender division of labour (Hochschild, 1979; Henz, 2009, 2010; West and Zimmerman, 2009; Grigoryeva, 2017), our first hypothesis predicts that:

H1: Women have a greater probability of providing care to parents, and also to parents-in-law, than men, regardless of care intensity.

Next to filial responsibility for one's own parents and parents-in-law, we also focus on how sibship sex composition affects the horizontal sharing of parental care duties (see Henz, 2009, 2010 for the UK; Grigoryeva, 2017 for the USA). Few studies to date have investigated the role of siblings in parental care for family members, revealing a gender division in elder care among siblings (sons and daughters) in addition to the division between spouses (Horowitz, 1985; Finch and Mason, 1993; Spitze and Logan, 1990; Lee, Spitze and Logan, 2003; Henz, 2009; Grigoryeva, 2017). They also found that the frequency of care provision and the type of care provided are associated with the sharing of caring responsibilities. When care relationships become intense, sons and especially sons-in-law, tend to be replaced by their female counterparts (Horowitz, 1985; Henz, 2009). They also found that the gender composition of sibship seems to influence the provision of personal care, which more often involves intimate activities, more than domestic help (Shuey and Hardy, 2003). In their work on 11 European countries, Brandt, Haberkern and Szydlik (2009) indicate that the probability of providing practical help (with housekeeping, shopping, and paperwork, e.g.) decreases with each additional sibling, but when personal care, and not help, is considered, this finding is not consistent. This result may have been influenced by a failure to take into account the gender composition of siblings, which might play an important role in the distribution of care responsibilities among offspring. Further, US studies on adult child–parent(-in-law) care relations indicate that sisters substitute for sons in parental care commitments especially when care relationships are intense (Gerstel and Gallagher, 2001; Grigoryeva, 2017). Matthews and Heidorn (1998) find that while men in brother-only sibling sets draw on labour provided by their wives when caring for elderly parents, men with sisters rely on them as primary caregivers. Consistent with these studies, our second hypothesis predicts that:

H2: Having sisters reduces the likelihood of being involved in care provision (i.e. by sharing or shifting care responsibilities) more than having brothers, and that this relation intensifies as caregiving intensity increases, as this increases the pressure to share responsibilities.

Net of sibship gender composition, we expect children who are single rather than in a couple to have fewer competing responsibilities (towards a partner) and thus to be more readily available to engage in, or less able to justifiably opt out of, parental care. We thus control for children family status in the analyses.

Yet even given this wealth of previous studies spanning different times and national contexts there are still some opaque points in the literature. More specifically, we still lack a better understanding of how the gender division of labour influences the allocation of caring responsibilities across family ties (partners and siblings) in a multi-generational context with both upward and downward care responsibilities. We will attempt to fill this gap, by taking into account competing care demands from both older and younger generations.

The Bidirectional Nature of Care Responsibilities

One of the most relevant issues in relation to the 'sandwich generation' is the bidirectional nature of care

relations (Grundy and Henretta 2006; Vlachantoni *et al.*, 2019). Literature on family care dynamics increasingly looks at how support can potentially be claimed by the younger generation, like children, and by frail elderly persons (Brody, 1981; Giarrusso *et al.*, 1996; Grundy and Henretta, 2006; Fokkema, Bekke and Dykstra, 2008; Dykstra, 2010). These studies mainly adopt a three-generational perspective, in which family carers are 'squeezed' between upward care for parents and downward care for their own children. However, the squeeze experienced by the sandwich generation should be more likely to be experienced by active grandparents (especially grandmothers), who may have to care for their living parents and young grandchildren, and who only indirectly support their own (employed) adult children. The increased healthy life expectancy further supports the need to adopt a four-generational perspective, including an additional generational 'layer', namely the youngest generation of grandchildren.[1]

Some previous research indicates that children should be regarded as competing obligations rather than as an opportunity when care for parents is considered (Brandt, Haberkern and Szydlik, 2009). Conversely, studies on parent care in the UK finds not only that the presence of dependent children does not affect the chances of providing care to parents or in-laws (Henz, 2010), but also a positive association between providing care to downward and upward generations simultaneously (Vlachantoni *et al.*, 2019). The hypothesis of 'family solidarity' proposed by Grundy and Henretta (2006) on care exchanges between two generations provides a further step in this direction. In their work, the authors state that providing help to adult children increases the probability of caring or supporting an elderly parent or parent-in-law, and vice versa, indicating that 'some families are more engaged in intergenerational exchange than others' (Grundy and Henretta, 2006: p. 718). These findings suggest that families with stronger solidarity preferences tend to assist both generations rather than prioritizing recipients, while those with a low preference for solidarity seem less likely to help multiple generations (see also Hagestad, 2006). In line with this literature, our third hypothesis predicts that:

H3: Those who are more likely to provide intensive support to their parents(-in-law) are also more likely to support downward generations.

Data, Sample, and Methods

We tested our hypotheses on data from the Survey of Health, Ageing and Retirement in Europe (SHARE). SHARE is a multidisciplinary, cross-national panel database of micro data on health, socio-economic status and social and family networks based on a nationally representative sample of non-institutionalized individuals aged over 50 and their (possibly younger) spouses, in several EU countries (Börsch-Supan *et al.*, 2013). We selected seven countries that took part in the second and sixth waves of SHARE (data release version 6.0.0) to represent different intergenerational regime (Saraceno and Keck, 2010)[2]: Denmark (DK), France (FR), Belgium (BL), Italy (IT), the Netherlands (NL), Spain (ES), and Sweden (SE). Concerning the countries grouping, a clarification is needed. Framing intergenerational caring responsibility in macro perspective is a difficult exercise (Saraceno and Keck, 2010). Three different dimensions compete in determining intergenerational national orientation: levels and modes of coverage of formal sectors; civil law regulations; and the socially constructed gender norms. Additionally, all three dimensions, especially the first two, differ if applied to young or old generations. Although intergenerational analysis should adopt a cautious approach concerning countries grouping due to the intrinsically related difficulties in capturing in full intergenerational regimes (Saraceno and Keck, 2010), the literature on different models of family care provision for the elderly across Europe allows to partially account for these limitations by providing the grounds for the grouping of countries considered here (Glaser, Tomassini and Grundy 2004; Knijn and Komter, 2004; Fokkema, Bekke and Dykstra, 2008; Kalmijn and Saraceno, 2008; Saraceno, 2008, 2010; Saraceno and Keck, 2010; Dykstra and Komter, 2012; Dykstra *et al.*, 2013; Nazio and Saraceno, 2013; Dykstra, 2018). Generally, a Nordic model emerges that is characterized by broad, universalistic coverage (SE and DK). There is also a conservative or Continental model, which can be further subdivided into countries where there is a support system for direct family involvement in care provision (FR and BL) and countries with a more clear-cut differentiation between family and state, which acts as the primary care agency, especially in relation to elderly care (NL). Finally, there is a Mediterranean model, in which families operate as 'social clearing houses' (Bettio and Plantenga, 2004: p. 99), with frequent, diversified, exchanges within family networks and with weak formal public support (ES, IT). Additionally, intergenerational family solidarity varies not only across, but also within countries (Dykstra and Fokkema, 2011). Even beyond cultural and institutional influences, the existence of different typologies of adult child–parent relationships that cut across the European welfare state models means that we should further investigate individual characteristics and family circumstances when analysing intergenerational care relations.

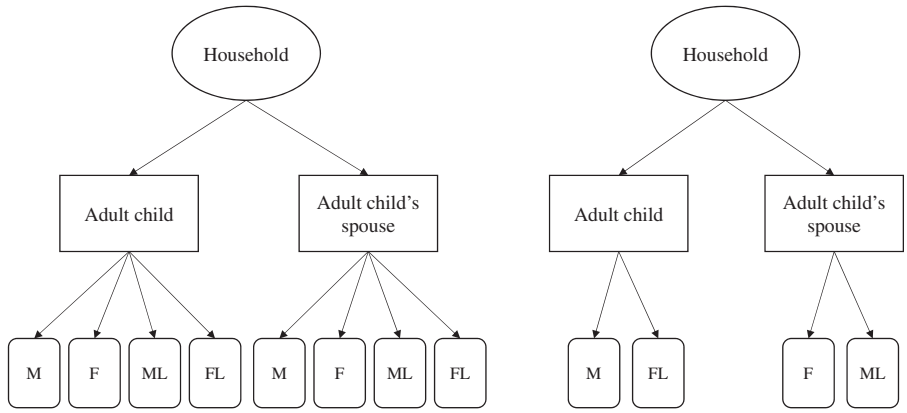

Figure 1. The hierarchical structure of the data

Note: Mother (M); father (F); mother-in-law (ML); father-in-law (FL).

We were restricted to the use of the second and sixth waves of SHARE,[3] fielded in 2006 and 2015, due to questionnaire differences.[4] Owing to sample size differences and difficulties in retaining the data from a single record (the most recent wave) for longitudinal respondents, the analytical sample comprised 64.1 per cent of the respondents interviewed in the last available wave (2015).[5] Household income, educational level, and employment status variables were retrieved by the multiple-imputation models provided by SHARE (for further details see the SHARE release guide 6.0.0); a listwise deletion of missing cases was applied in other instances of missing values in line with previous work.

Our analysis focuses on child–parent/in-law care relations. Information, including data on parents' characteristics, was collected from survey respondents (children and their partners) rather than from elderly parents. In order to explore within-couple and between-sibling sharing of care responsibilities (the latter also for non-partnered individuals), we selected couples or single individuals with at least one living, non-cohabiting parent (or in-law) at the household level. We focused only on dyads where children did not cohabit with their parents to exclude the proximity effect in the redistribution of care responsibilities. The sampled respondents and their partners (second generation—G2) were our anchor, their parents/in-laws (first generation—G1) were the generation to which upward care was offered, whereas their children or grandchildren (third and fourth generations—G3/G4) were the generations potentially receiving downward care (from G2). This gave a total of 17,011 observations (either sampled individuals or their spouses) in G2, 8,722 women and 8,289 men aged between 24 and 92 ($M = 57.3$, $SD = 6.5$). As Figure 1 shows, in order to identify between household (parent–child) and within-household (between partners) family ties, we traced the adult child–parent(/in-law) relationship for each couple member within a household. We do not distinguish between marital and cohabiting relationships, and, therefore, 'parent-in-law' status is attributed to the partner's parents regardless of the couple's legal bond [see Kalmijn (2016) and van Houdt *et al.* (2018) for more on the increased complexity of family relations in recent birth cohorts]. Previous research has revealed that there are no significant differences in contact frequency between married and cohabiting couples (Nazio and Saraceno, 2013). Similarly, we do not distinguish between biological parents and the very few cases of stepparents in the analyses.

In our design, each respondent (adult child) may have up to four living parents or in-laws to whom they could be providing care (on average they have 1.7, $SD = 0.8$ still alive). As Figure 1 shows, the dataset is hierarchically structured in three levels, with parents and parents-in-law being nested within the adult children and their spouses (one's parents are the other's in-laws), which in turn are nested within households. Women's longer life expectancy and their somewhat higher average age in the sample resulted in a slightly lower average number of potential care receivers (living parents and in-laws) still alive for women than for men (respectively, 1.7 and 1.8).

We tested our hypotheses empirically using multilevel multinomial logit models comprising three levels: the (up to 4) dyadic relationships of individuals to their living parents and parents-in-law (level 1); the

care-providing individuals themselves (level 2); and their households, assuming they are in a couple (level 3). We opted for a multinomial model over an ordinal one because the statistical significance of the Brandt test provided evidence that the parallel regression assumption was violated. The unbalanced design of the sample requires a multilevel framework: individuals may be either single or in a couple, and can have all or only some of their parents and/or in-laws alive. Individuals may thus have one to four potential ties to elderly people in need. This also accommodates women's average higher life expectancy, which might lead to women's overrepresentation at the lowest level among the mothers/mothers-in-law. Further upper levels allow us to control for a likely similarity between observations, given the nested nature of the dyads within individuals and a possible sorting of (more alike) individuals within couples. Finally, multilevel models allow us to control for characteristics at the level of either care recipients (elderly parents or in-laws) or caregivers (individual providers) and their households (presence of downward care demands, among others). A standard approach that disregards these similarities and asymmetries could bias the estimates of coefficients and standard errors (DiPrete and Forristal, 1994; Snijders and Bosker, 1999).

Dependent and Independent Variables

We classified carers as adult children who had provided practical help and/or personal care to a non-cohabiting parent(-in-law) in the last 12 months.[6] Rather than focusing on the different types of elderly care (e.g. Brandt, Haberkern and Szydlik, 2009), we focused on different frequencies in the provision of support by adult children/in-law—daily, weekly, or less frequent care or help. If both care and help were provided, we selected the highest frequency of support. We opted to model care frequency, since we are primarily interested in how gender divisions in care vary at growing levels of commitment, in light of the potential impact of these activities on adult children's daily life routines. The average age of the parents in our sample is 85.1 years (SD = 7.4)—an age at which individual independence tends to be limited (Table A1 in the appendix provides descriptive statistics of the independent variables use in the model).

The dependent variable is a categorical variable that took on a value of 0 (reference category) if the elderly relative was alive but no care was provided to that tie in the past 12 months; 1 if care was provided monthly or less frequently; 2 if care provision happened weekly and; 3 if it was daily or almost daily.[7]

On the total sample, 81.65 per cent of adult children do not provide any form of parental care, 8.91 per cent provide care monthly or less often, 6.78 per cent do that every week, while the daily or about daily provision of parental care concerns 2.66 per cent of the adult children included in the sample.[8] The relatively low figures in the distribution may be deceiving in that they suggests that parental care only pertains to a limited share of the adult children population. A diachronic perspective would provide a different picture. When using cross-sectional data, it is only possible to capture information on a single point in time or a relatively short time window (the last 12 months); such analyses are well-suited to examining the associations of interest. However, considering the lifespan of adult children, their probability of being involved in parental care at some point in life is significantly higher when compounded over the years of exposure to co-living of both generations.

In addition to the dyadic parent–child(/daughter/son-in-law) relation by the gender of each dyad member (we chose female adult child to father as the reference category), other salient independent variables include whether subjects are only children or—if not—whether they have living sisters and/or brothers (having only brothers is the reference category) and whether they care for children and/or grandchildren, if they have any, with the relative frequency (we employed the same frequencies as for the dependent variable, with no care provided as the reference category). In line with the literature review presented in the early part of the paper, we included other controls. At the household level, controls included household income (measured in quintiles on the basis of the national distribution of household income for each wave), the existence of any small (grand)-children (under 14 years of age), and whether respondents lived with a spouse or partner. Controls at the child level (respondents and their partners as potential caregivers) included age (with both linear and quadratic terms centred around 57 years), level of education (up to lower secondary, upper secondary as the reference category, and tertiary, with reference to ISCED-97), current occupational status (retired as the reference category, employed or self-employed, unemployed, permanently sick or disabled, homemaker, or other type of occupation). At the parent (dyadic) level, controls included the parents' (or in-laws') age (centred around 85 years), self-perceived health status (good health is the reference, and fair or poor health are the contrast categories), whether they reside with a partner, and a measure of the distance to the child/in-law household (categories are more than 25 km; between 5 and 25 km; between 1 and 5 km; less than 1 km; don't know).

Finally, a set of dummy variables control for the country care regime clusters: Southern (IT and ES) or Nordic (DK and SE) versus Continental (NL, BL, and FR, chosen as the reference category). Summary statistics for all variables are provided in the Appendix.

Results

Caregiving appears to be a highly gendered activity, with results consistent with a cross-sex taboo and a higher acceptance of daughters caring for their fathers than sons for their mothers. In line with previous literature, the preliminary descriptive statistics (Table 1) suggested a clear association between the gender of providers and recipients and their relational bond within the family (biological vs. legal bond). In line with our first hypothesis, daughters (left-hand side of the table) tended to be engaged in intensive caregiving more often than sons (right-hand side of the table), particularly to their own parents, and mothers tended to receive it more frequently than fathers. Direct offspring also tended to be more involved than their spouses.

To discount the possibility of compositional effects, we tested our hypotheses more accurately by estimating the probability of providing different intensities of care while controlling for the characteristics of both providers and recipients. The results of the multivariate analysis (Table 2) show clearly that intensive care for elderly parents does not seem to transfer over to spouses for any of the caregiving intensities (Parents-Dyads section in the table). The mother-/father-in-law coefficients for both male and female are all statistically significant and strongly negative. The likelihood of providing care to in-laws was much lower than the likelihood of providing care to one's own parents for both men and women, and the set of coefficients display negative and strongly statistically significant effects (see also Figure 2). In line with previous findings, the results also confirmed that care is still highly gendered: more women tended to provide it but also to receive it, especially from their daughters (a robustness check revealed that this is true especially for single living mothers). No statistically significant differences between mothers and fathers were observed in sons' provision of very intensive daily care and there was a somewhat higher provision of care to mothers by sons (as well as daughters) in weekly and monthly frequency. To better understand potential inhibitions due to an opposite-sex taboo and gender norms, we further depict the pattern of results more clearly by gender (of caregivers and recipients) and their relational bond over the different intensities of care provision employing average predicted probabilities (Figure 2).

Figure 2 (first panel upper left 'Never') shows that mothers were the most likely to be attended (i.e. have the lowest probability of not receiving care) by their daughters, net of all other household, respondent, and elderly parents characteristics. This is a result that holds true for all the caregiving frequencies (other panels of Figure 2, please note differences in the scale of Y-axis to better reflect predicted incidence and differences across gender). Considering only the genders of care providers and recipients, all else constant, daughters had a higher likelihood of caring for their mothers (and of providing weekly care for their fathers) than sons. The differences between daughters and sons were not statistically significant when low-frequency care was provided to their fathers or when care was provided to in-laws. Fathers seemed equally likely to be supported by either of their children (they were somewhat more likely to receive care from their daughters on a weekly basis). Figure 2 also shows that daughters ('Female') were on average around twice as likely as sons to provide care to their parents on a weekly basis ('Male'). Daughters are also far more likely to be involved in daily care for their mothers than sons. Robustness checks on models separated by gender of care provider confirmed these results. For sons, there were no statistically significant differences between care towards their mothers and fathers for all the caregiving frequencies, while the opposite was true for daughters. Contrary to our first hypothesis' expectations, with regards to assisting in-laws, we found no large difference by care provider gender and a much lower average likelihood for both males and females

Table 1. Share (per cent) providing elderly care, by care frequency, gender, and family tie

Care frequency	Female				Male			
	Mother	Father	Mother-in-law	Father-in-law	Mother	Father	Mother-in-law	Father-in-law
About daily	5.80	2.84	1.40	0.51	3.23	2.31	0.97	0.56
About weekly	11.93	7.31	3.99	1.61	7.60	5.35	2.57	1.74
Monthly or less often	11.13	7.35	5.27	2.49	10.10	9.78	4.92	3.89

Source: Authors' calculation on SHARE data (waves 2 and 6, unweighted).

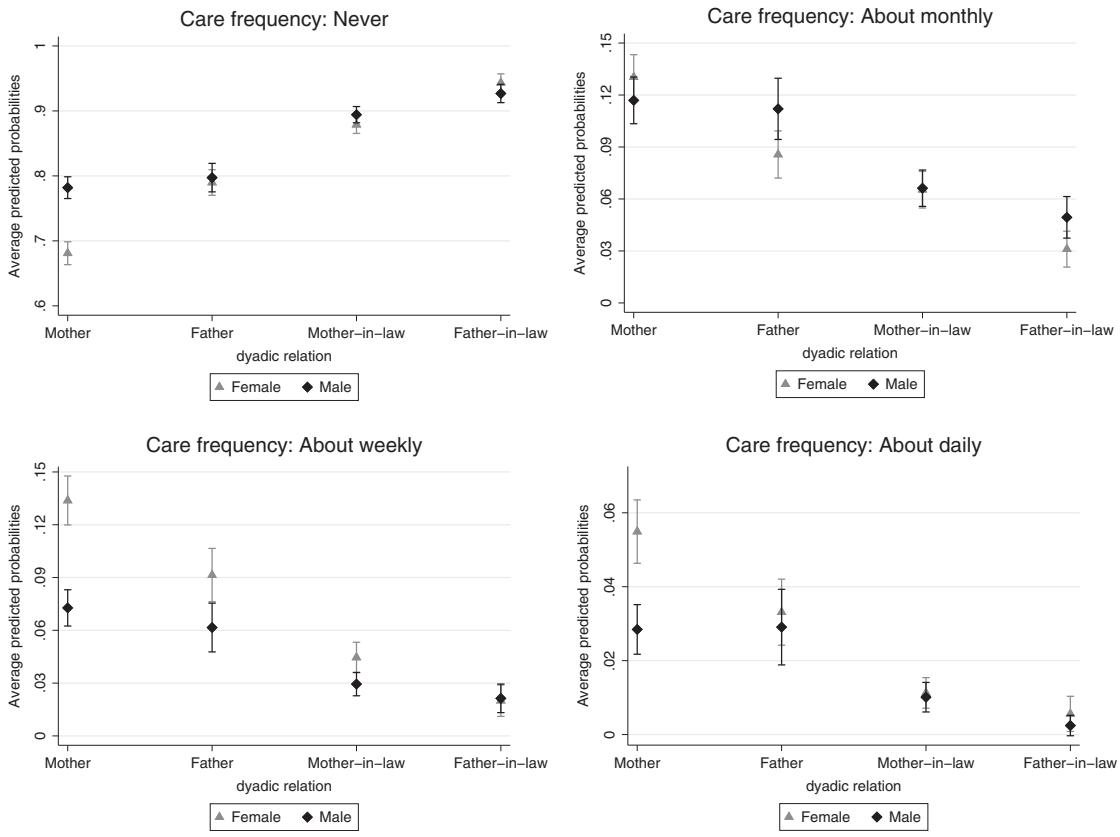

Figure 2. Average predicted probabilities of adult children caregiving to parents(-in-law) by gender and care intensity

Source: Authors' calculation on SHARE data (waves 2 and 6, unweighted).

across all caregiving intensities. Overall gender differences, with a higher female involvement, are stronger at higher frequencies of parental support, either daily or weekly. We observed lower levels and mostly non-statistically-significant gender differences towards in-laws, with women slightly more likely to be involved in weekly care for their mothers-in-law than men. Women's higher likelihood of caring for their mothers (and to some extent for their mothers-in-law) supports the idea of a preference for same-gender caring (Szinovacz and Davey, 2008; Grigoryeva, 2017) and for the higher relative strength of the mother-daughter bond (Swartz, 2009). However, this direct gender effect adds up to that of having sisters among the siblings with whom to share the caregiving role; having sisters in the sibship affects differently sons and daughters.

The Sibship Unequal Distribution of Care

A further noteworthy empirical result refers to the inter-household sharing of elderly care (Table 2) and clearly supports our second hypothesis. In this regard, the presence of living sisters (but not brothers) further lowers the probability of men providing intensive care to their parents(in-law) on a daily basis net of sons' already lower propensity to provide care than daughters. This 'disburdening' effect of sisters is not experienced by women to the same (statistically significant) extent, except when we look at care provided on a weekly basis. Care provided weekly by sisters is indeed the only exception in which, by sharing among sisters, some disburdening for women, from other women, occurs. In line with our hypothesis, caregiving thus does not seem to be shared equally among siblings in that the presence of brothers (reference category) has no significant association with a lower probability of providing care. In other terms, the presence of brothers leaves the probability to provide care the same as that experienced by a single child. Further, when the frequency of caring can more easily be shared among siblings, i.e. when care is provided weekly, sisters seem to lessen the (already

Table 2. Multivariate model results, multilevel mixed-effect model

	Daily (about)		Weekly (about)		Monthly (about)	
Categories	β	SE	β	SE	β	SE
Household/couple level						
Household income quintile						
3° quintile (r.c.)						
1° quintile	−0.43*	0.23	−0.64***	0.18	−0.47***	0.18
2°quintile	0.09	0.21	−0.28*	0.15	−0.14	0.135
4° quintile	0.15	0.19	0.03	0.14	0.13	0.13
5° quintile	0.28	0.19	0.14	0.14	0.23*	0.13
Cohabit with partner						
Cohabitation (r. c.)						
No cohabitation	0.39**	0.19	0.36***	0.13	0.58***	0.10
Presence of (grand)children						
No (grand)children <14y (r. c)						
(Grand)children <14y	−0.13	0.16	−0.14	0.10	−0.17*	0.10
Adult children/partners						
Age (centred)	−0.01	0.01	−0.03***	0.01	−0.04***	0.009
Age (squared)/100	−0.00	0.001	−0.00***	0.001	−0.00***	0.0009
Level of education						
Upper secondary (r. c.)						
Up to lower secondary	−0.16	0.15	−0.44***	0.10	−0.22**	0.10
Tertiary	0.38**	0.16	0.08	0.10	0.41***	0.09
Current job situation						
Retired (r. c.)						
Employed (or self-)	−0.64***	0.18	−0.30**	0.13	0.04	0.13
Unemployed	0.81***	0.26	−0.12	0.23	−0.13	0.22
Permanently sick/disable	−1.15***	0.36	−0.97***	0.24	−0.86***	0.23
Homemaker	−0.05	0.22	−0.13	0.17	0.0003	0.19
Other	−1.02*	0.54	−1.31***	0.40	−0.11	0.31
Care for children and grandchildren						
No care (r. c.)						
About daily	0.48*	0.26	0.29	0.23	0.08	0.25
About every week	0.18	0.21	0.59***	0.14	0.22	0.14
About every month	0.30	0.25	0.53***	0.15	0.31**	0.14
Less often	0.12	0.27	0.10	0.16	0.55***	0.13
Sisters alive (female resp.)						
No sister alive (r. c.)						
At least one sister alive	−0.21	0.16	−0.25**	0.12	−0.13	0.11
Sisters alive (male resp.)						
No sister alive (r. c.)						
At least one sister alive	−0.39*	0.21	−0.08	0.14	−0.16	0.12
Only child						
Sibling(s) alive (r. c.)						
No sibling(s) alive	−0.10	0.18	−0.09	0.13	−0.12	0.12
Parent-dyad level						
Self-perceived parent(s) health status						
Excellent/good (r. c.)						
Fair	1.02***	0.15	0.37***	0.09	0.14*	0.08
Poor	1.91***	0.16	0.88***	0.10	0.23**	0.10
Don't know	−0.83	0.63	−1.11***	0.33	−1.21***	0.27
Age (centred)	0.08***	0.011	0.07***	0.008	0.04***	0.007
Partnership status						

(continued)

Table 2. (Continued)

Categories	Daily (about)		Weekly (about)		Monthly (about)	
	β	SE	β	SE	β	SE
Single (r. c.)						
Couple	−0.51***	0.14	−0.62***	0.10	−0.26***	0.08
Relation parent(-in-law) adult child/partner						
Female-father (r. c.)						
Female-mother	1.05***	0.19	0.88***	0.13	0.88***	0.12
Female-mother-in-law	−1.65***	0.26	−1.20***	0.16	−0.66***	0.15
Female-father-in-law	−2.75***	0.50	−2.39***	0.28	−1.77***	0.23
Male-mother	−0.19	0.25	−0.15	0.17	0.37**	0.16
Male-father	−0.23	0.30	−0.46**	0.20	0.26	0.17
Male-mother-in-law	−1.87***	0.31	−1.71***	0.20	−0.66***	0.17
Male-father-in-law	−3.55***	0.64	−2.24***	0.26	−1.19***	0.20
Geographical distance						
1–5 km (r. c.)						
≥25 km	−3.10***	0.26	−2.14***	0.13	−0.67***	0.11
5–25 km	−0.97***	0.18	−0.45***	0.11	−0.17	0.11
<1 km	1.47***	0.15	0.35**	0.12	0.39***	0.13
Don't know	−18.84	15713.0	−20.05	8432.1	−19.72	8377.0
Regime						
Continental (r. c.)						
Nordic	−0.51***	0.19	0.14	0.11	0.71***	0.10
Southern	−1.14***	0.16	−1.41***	0.13	−1.68***	0.13
Random-effect parameters						
Level 2: adult children/partners	0.05***(0.03)					
Level 3: households/couples	2.58***(0.20)					
Model characteristics						
n dyads: child–parent relationship (level 1)	17,011					
n individuals: responding child (level 2)	10,006					
N households (level 3)	5,706					

Source: SHARE waves 2 and 6, release 6.0.0. Own calculations. Sample weights are not used. Multinomial multilevel model.
*$P < 0.10$; **$P < 0.05$; ***$P < 0.01$ (two-tailed tests).

higher) pressure each one experiences, but when specialization, i.e. the need for daily care, arises it is brothers who seem more likely exempted. Robustness checks reveal that this effect is driven by the Southern cluster of countries, suggesting that especially in more traditional contexts, caregiving to parents might still be perceived more as a daughter's responsibility and therefore be more frequently shared among (or shifted to) sisters (by sons), particularly when care demands intensify.[9]

Supporting the (Gender-Biased) Specialization Hypothesis

Interestingly, results support our third hypothesis: actively contributing to downward care for small children or grandchildren under 14 does not seem to conflict with providing care for the elderly. In line with Hagestad's (2006) findings and Grundy and Henretta's (2006) hypothesis, the results suggest that someone who provides intensive care to parents or parents-in-law is also inclined to provide intensive care to children and grandchildren, with the lower care frequency coefficients pointing in the same direction. It is not the presence of young children and/or grandchildren per se that affects the probability of giving parental care. The absence of a statistically significant association suggests that upward and downward care responsibilities do not represent a conflict *per se*. Rather, as hypothesized, it seems that household attitudes, propensity to care, or specialization in caring might mediate care provision. Robustness checks by gender of care provider indicate that women and men tend to be engaged in bidirectional care relationships to similar extents on a weekly and monthly basis. However, when parental care is intensive, the presence of young children and/or grandchildren tends to represent a conflict only for women. The sample size does not allow to test directly whether this depends on

the sovra-representation of women providing intensive care in both directions or the higher selectivity of men who provide intense caregiving upwardly, who might be better able to respond to further demands. Further inquiry, possibly by means of qualitative research, could help clarify whether expectations around caregiving in both directions differ by gender.

An Unexpected Result: The Care Regime Effect

There is still a net significant association with the institutional contexts. Nordic countries are characterized by a greater probability of less intensive caregiving (monthly) than Continental countries (the reference category) and a slightly lower propensity to provide daily care (Table 2). All else equal, Southern countries display more negative coefficients across all care intensities than the Continental countries, which are larger for lower frequencies of caregiving. This finding reveals a lower degree of overall involvement that increases with care intensity. It could either be the result of a larger rate of co-residence with frail parents in the South (0.8 per cent of Nordic, 1.6 per cent of Continental, and 5.7 per cent of Southern households contain at least one elderly parent; weighted figures); in this study, co-resident parents and children are excluded from the analysis. Alternatively, it could also be that larger families in the South are associated with a higher degree of sharing, which would reduce the risk of direct involvement for each child. Finally, it might also reveal a different cultural understanding of what caregiving means, with individuals in the South having a higher threshold for acknowledging and reporting support as a caregiving activity instead of what is 'naturally' expected by the filial role (Ogg and Renault, 2006; Kalmijn and Saraceno, 2008; Dykstra, 2018).

Confirming Previous Studies' Findings

The other controls in the analysis reflect what we expected to find based on the literature (see Table 2). An elderly person's spousal status is a significant predictor of children's involvement in care: elderly people's partners, when still able, are most often the first care providers. A living partner or spouse would thus decrease or reduce the need for care providers external to the household, especially at higher frequencies of support. Robustness checks with an interaction term between parents' spousal status and their gender confirm that mothers are attended to more often, as are both parents when single. The opposite is true for children's family status, with non-partnered children being more likely to be assigned caring responsibilities at any frequency level. As hypothesized, when distributing care responsibilities among children, married children might have more justifiable reasons for not taking on the larger load given their competing family responsibilities. As expected, geographical distance is a strong predictor mediating the likelihood of providing care on a very frequent basis: the closer the potential provider to the elderly person, the more likely he/she is to become a caregiver. However, given that our data are cross-sectional, this association cannot be read causally, since a shorter distance might have been triggered by an increased need on one side or the other. The same gradient occurs with children's perception of the elderly parent's health status: the more compromised their health is (poor and to a smaller extent fair), the more likely it is to trigger intensive caregiving.

Finally, individual circumstances, occupational status, and health condition of adult children all seem to be associated with the likelihood of them providing care in the same direction as previous studies have shown. Employment (or self-employment) seems to conflict with intensive care provision; poor health or disability also prevent children from engaging in an often demanding activity. Interestingly, income and education levels, albeit seem not to be clearly associated with the likelihood of providing care, display some inconsistency with previous literature. Net of other caregiver and recipient characteristics, we found a higher propensity to give upward care of higher educated compared with those with medium education, as well as a lower engagement of those in the lowest income quintile compared with those in the median one.

Controls and Robustness Check

We have conducted several robustness checks to increase the confidence that our results are stable across different specifications and are not biased by modelling choices or the operationalization of variables. These results are available in the Supplementary Data. First, we do not include weights in our analyses to account for sampling probabilities, because we pooled two different waves from SHARE to increase the sample size. However, we ran models with weights with no substantial results variations. Further, when we ran separate models for both genders of care provider and for the last wave only, all effects remained in the same direction but, as expected, some of the coefficients lost statistical power and became statistically insignificant once the sample size was reduced. Secondly, we ran alternative specifications with the dependent variable (and measure of downward care) in three categories, clustering the less intensive 'monthly'

and 'less than monthly' care provision categories into the 'no care' category; this did not lead to an appreciable difference in results. We also ran separate models for the three country regime clusters. In these models, which were characterized by a small cell count, especially in the Nordic cluster, we found that the effect of sisters for men was statistically significant only in the Southern regime, possibly driving the main effect in the pooled model. A further pooled model with an interaction term between the presence of a sister and regime cluster confirmed this result: when care is daily, it is only in more traditional societies that sisters seem to decrease men's probability of engaging in very intense elderly care. Finally, although modelling an interaction of the elderly parent's partnership status by gender revealed an increased likelihood of daily care for mothers than fathers when single, it did not alter our results significantly. Testing for the spouse's occupational status did not bring further new insights either.

Discussion

Recent social and demographic changes linked to family transformations suggest likely changes in caring responsibilities in two directions, upward and downward. In a context in which a further increased verticalization of family structures is expected (Bengtson *et al.*, 1990; Bengtson, 2001) along with greater competition between generations for (finite and shrinking) family care resources (Grundy and Henretta, 2006), we explored the gender dimension of the distribution of family support to elderly people by care intensity. Specifically, we contributed to the literature by examining the gender dimension of care provision to the elderly by adult children and their spouses, while also accounting for the presence and gender composition of their sibship, as well as for potentially conflicting demands for downward care from children or, more often, from grandchildren. We did so while distinguishing between care intensity: extremely demanding care (daily), intense care (weekly), or less care (monthly, or less, or none).

Our use of the SHARE data has provided new empirical evidence on the sharing of responsibilities for informal family-based care for (non-co-resident) elderly parents or in-laws. The analysis has confirmed that elderly care is still very gendered, and mainly runs through consanguineal kin ties. The most salient tie is a direct parent/filial bond, with sharing among siblings, and especially sisters; this sharing process reduces the involvement of male siblings, especially when caring demands are intense. Male children have a much lower likelihood of providing care overall than female ones do. This does not seem to be achieved by sharing responsibility with, or shifting it to, their (female) partners within the household but by shifting it to their sisters (if any) across households, especially in the Southern countries. The gendering of intensive caring duties for upward generations takes place within a framework of (mainly) filial lineage, according to which, in more traditional societies, sons are disburdened by their sisters in ways that female children are not (by their male siblings). In other words, it is not the presence of siblings per se that favours a wider sharing of responsibilities (lowering the burden of intensive caring for each) but sibling gender. The presence of sisters lowers the likelihood of very intensive (daily) caregiving for their brothers, but the presence of sisters only reduces care burdens for other sisters when it comes to providing weekly care; the presence of brothers does not have the same effect on their sisters as the presence of sisters has for brothers.

We also found that it is not the mere presence of grandchildren that predicts the (lower) probability of becoming an intensive, upward caregiver. Active engagement in downward caregiving (for children or grandchildren) does not necessarily seem to conflict with, or reduce the probability of, upward intensive caregiving (for parents). If at all, individuals more likely to actively care for elderly parents also seem to be more likely to be active in both directions, at least on a weekly basis. This result offers new empirical evidence on the idea of a path-dependant developmental process of 'caring careers', whereby initial caregiving activities (upwards or downwards) might develop into a gender-biased specialization in unpaid care work (Finch and Mason, 1993). Controls confirm that distance plays a crucial role in mediating the provision of care, as do the residential arrangements of both children and parents, which is in line with the previous literature (Van den Broek and Dykstra, 2017); parents living alone are more likely to receive care, and non-partnered children are more likely to offer it.

Our main contribution to the available literature is the multi-generational and comparative focus we apply to the gendered nature of within-couple and between-sibling sharing of responsibilities for elderly care in seven countries in Europe. Specifically, our analysis explores the role of competing care demands from downward generations in a multi-generational context.

Our findings suggest two important policy implications. First, policies incentivising informal long-term care as a way of formalizing family care should be framed keeping in mind that they outmost concern middle-age women close to retirement age but still in the labour market and, in the long run, with a shrinking

pool of available siblings (sisters) with whom to share care responsibilities. Also, the widespread devaluation of care work, even when compensated, would have gendered effects on both retirement savings and employment contributions towards a pension. The lack of widespread and flexible work-life-balance measures might sharpen the trade-off between working and unpaid caregiving especially for those (mostly women) with double directional responsibilities. On the other hand, the lack of universal care service provision with flexible coverage might also segment the standards and the amounts of care provided in each direction. Further, an increasing geographical mobility of younger generations, and welfare spending cuts might differentially expose to care deficit both (upwardly) the elderly whose children have migrated and (downwardly) their children and grandchildren.

Second, findings indicate that (grand)child and elderly care, albeit at the two opposite ends of the demographic structure, can rely on the same generation. To the extent that intergenerational relations may contribute with economic, cultural and social capitals, the (un)availability of bidirectional support might differentiate the experiences of younger generations and inequality therein. Policies should thus adopt a life course perspective and assess their impact more broadly on the interdependencies between different generations (see also Hagestad and Dykstra, 2016). This aspect should be acknowledged in the design and implementation of child and elderly care policy, and even more so in case of policy supporting family caregivers.

We must acknowledge several limitations of this study. First, the use of cross-sectional data, as already mentioned, leads to underestimates of the incidence of care provision and limits the analysis of a relatively short-term phenomenon such as elderly care. Second, although divorce was a rare event in the parental generation, we do not control for the effects of family disruption in either generation [for more on the consequences of an increased family complexity see Kalmijn (2016) and van Houdt *et al.* (2018)]. Finally, our results are confined to a sub-sample of countries that were chosen on the basis of data availability and country characteristics and are therefore hardly generalizable to a larger, or different, pool of countries.

Looking at future demographic trends, our findings suggest a possible paradoxical implication. If the traditional gender division of labour does not rapidly change, shrinking family sizes with a reduced number of siblings could result in an even more gendered distribution of care among family members. Smaller families also risk prompting an increased risk of care deprivation for non-partnered (or no longer partnered) elderly men and for the population at large due to an increasingly prolonged participation of women (daughters) in employment. At the same time, in a context of aging populations, a decrease in horizontal family ties and the related possibility of sharing care responsibilities may lead to an overtaxing of family (self-)help, undermining its compensatory and vital role in (elderly) care organization, especially in Southern and Continental European welfare states.

Notes

1 According to SHARE data, around 33 per cent of those who provide care to their parent or in-law do also care for children and grandchildren, whereas 23 per cent of those who offer informal help to the latter also support their parents(-in-law). Additionally, looking at the potential risk of being involved in bidirectional care relations, data suggest that around a quarter of the surveyed population in Sweden and Denmark has simultaneously at least one parent(in-law) alive aged 75 years or more and children or grandchildren aged 12 years or below. This share slightly decreases in the continental countries (between 17 per cent and 18 per cent in France, Belgium, and the Netherlands) reaching in Italy and Spain the lower percentage (around 15 per cent).

2 The inclusion of the Netherlands instead of Austria and Germany—which were included also in the sixth wave of SHARE—in the Continental group stems from the peculiarity and high level of generosity of the Dutch elderly care sector coupled by a relatively low level of support towards childcare policies, which differentiates it from the other Continental countries (Saraceno and Keck, 2010).

3 The response rate of these waves varies significantly across countries, ranging from the 35.7% of Sweden in the second wave to 65.2 per cent of Denmark in the same wave. For a detailed overview of the response rate refer to Bergmann *et al.* (2017).

4 In these waves, questions related to informal care provision were asked to all potential household respondents, whereas in the fourth and fifth wave, they were only collected from one family member (the family respondent), preventing the possibility of investigating the intra-couple distribution of care responsibilities. The first and the third waves are not included in our analysis because in wave 1 both household and individual income measures are reported in gross terms, and wave 3, SHARELIFE, only focuses on people's life histories.

5 Given the structural nature of the relations hypothesized, we do not imagine them changing between the waves. A robustness check on the sixth wave only does not reveal substantial changes.
6 The question reads 'Now I would like to ask you about the help you have given to others. Please look at card 27 (38 for wave 2). In the last twelve months, have you personally given any kind of help listed on this card to a family member from outside the household, a friend or neighbour?' A showcard (27/38) illustrated a series of activities around personal care or practical household help, including dressing, bathing or showering, eating, getting in or out of bed, using the toilet, help with paperwork, repairs, gardening, transportation, shopping, and household chores. We selected help to parents/in-laws.
7 Our chosen dependent variable was created on the basis of SHARE variables SP011 using variable SP009 for the family ties identification. Robustness checks with three categories, combining the two less frequent categories ('monthly' and 'less often') together with no care provision yield analogous results.
8 Differences across country grouping considered are in line with previous studies. In the Nordic countries, a larger share of adult children engages in parental care but mainly on a weekly or monthly basis. Contrary, Southern countries are marked by a more limited number of parental care relationships but with a stronger orientation towards intense caregiving, whereas Continental countries are placed in between the two groups.
9 Unfortunately, the sample size does not allow for further investigate differences across the country grouping considered. The primary goal of this study is to examine how parental care responsibilities are distributed across family ties in the context of intergenerational relations. The testing of specific country regimes effects would have required using three-way interaction terms that the limited number of caregiving relations at different intensities in each direction do not support.

Supplementary Data

Supplementary data are available at *ESR* online.

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Appendix

Table A1. Summary statistics for variables included in the analysis

Variables	Vales	Per cent [Ø]	Remarks
Adult children			
Age		[57.24]	Age at interview year [Quadratic and centred (mean)]
Gender	Male	48.73	Adult children's gender
	Female	51.27	
Household income quintile	1° quintile	12.08	Computed at country and wave level on non-equivalized household income
	2° quintile	14.50	
	3°quintile	16.84	
	4° quintile	25.22	
	5° quintile	33.37	
Level of education	Up to lower secondary	35.25	Summarized classification according to International Standard Classification of Education (ISCED)
	Upper secondary	34.74	
	Tertiary	30.01	
Current job situation	Retired	21.06	Respondent's declaration, EU classification SHARE
	Employed (or self-)	59.23	
	Unemployed	4.38	
	Permanent sick/disabled	4.40	
	Homemaker	9.16	
	Other	1.76	
Care toward children and grandchildren	No care	73.80	Highest intensity of care provided to children and grandchildren
	About daily	3.14	
	About every week	8.47	
	About every month	6.94	
	Less often	7.65	
Presence of grandchildren	No grandchildren	77.68	The variable refers to grandchildren aged 14 years or less
	One or more grandchildren	22.32	
Cohabit with partner	Respondent cohabits with partner	90.76	
	Not cohabiting respondent	9.24	
Sisters alive (female resp.)	No sister alive	68.67	0 include male respondent with sister alive
	At least one sister alive	31.33	
Sisters alive (male resp.)	No sister alive	69.66	0 include female respondent with sister alive
	At least one sister alive	30.34	
Only child	Respondent with sibling(s) alive	82.79	
	Respondent with no sibling(s) alive	17.21	
Parents			
Self-perceived parent(s) health status	Excellent/very good/good	40.67	Respondent's estimation, summarized classification according to EU categorization SHARE
	Fair	35.41	
	Poor	20.57	
	Don't know	3.35	
Age		[85.12]	Parents' age, obtained through adult children declaration [centred (mean)]
Household status	Single	56.83	Proxy: if both parents in same living distance
	Couple	43.17	
Dyads			
Relation parent(-in-law) respondent	Mother-female	21.16	19.122 dyads with an average of 1.6 parents (in-law) alive
	Mother-male	15.97	
	Father-female	10.34	
	Father-male	7.32	

(continued)

Table A1. (Continued)

Variables	Vales	Per cent [Ø]	Remarks
	Mother-in-law-female	13.56	
	Mother-in-law-male	17.01	
	Father-in-law-female	6.20	
	Father-in-law-male	8.44	
Geographical distance	≥25 km	36.81	
	5–25 km	24.48	
	1–5 km	20.72	
	<1 Km	17.95	
	Don't know	0.05	
Regime			
	Nordic	27.98	SE and DK
	Continental	40.79	FR, BE and NL
	Southern	31.23	IT and ES

Source: SHARE waves 2 and 6 release 6.00. Own calculation. $n = 17{,}011$, dyads 10,006 and seven countries.