Who visits whom? Hosting and visiting reciprocity among parents and their adult children in the Netherlands

Preliminary results

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Abstract

In this paper we address the question: to what extent do family network configuration, household mobility, and different family and personal needs such as the need for support or childcare influence relative frequency of visiting and hosting among parents and their adult children (visiting balance)? We define relative frequency as the ratio of the frequency adult children visit their parents and the frequency of hosting them. We use data from the Netherlands on family networks and regression analysis to investigate which side of the intergenerational dyad travels (more) for face-to-face (F2F) contact. Results suggest that those individuals who have siblings and those who have siblings that live close to the parents travel relatively more. Furthermore, visiting reciprocity is associated with support needs reciprocity and with different life course stages – young adults, grandparents and those who provide instrumental support travel more. The research highlights the need to understand intergenerational F2F contact not only as defined by contact frequency but also by how this contact is organized in terms of hosting and visiting.

1. Introduction

In this paper we focus on a central part of intergenerational relationships, namely face-to-face (F2F) contact through in-home visits. F2F contact between parents and their adult children is beneficial for both. It reinforces feelings of affection (Lawton et al., 1994) and it helps in developing and maintaining solidarity within the family (Bengston & Roberts, 1991; Brownstone, 2008). During the visits instrumental and emotional support is exchanged, like help in childcare, or the help provided by adult children to their ageing parents (Rossi & Rossi, 1990; Smith, 1998). Through maintaining contact with the family network individuals accumulate valuable social capital (Astone et al., 1999).

Previous research on contact between parents and their adult children has focused mainly on explaining the frequency of their F2F contact. It has been repeatedly shown that frequency of F2F contact is negatively associated with the distance between parents and children (e.g. Dewit et al., 1988; Lawton et al., 1994; Grundy & Shelton, 2001; Fors & Lennartson, 2008) and positively associated with the need for support due to aging, disability or illness (e.g. Rossi & Rossi, 1990; Kaufman & Uhlenberg, 1998; Klein Ikkink et al., 1999). An aspect which until now did not receive sufficient attention is the concrete organization of F2F contact. F2F contact between parents and children requires them at least to a certain extent to visit each other at their respective homes. In-home visits are a major part of intergenerational F2F contact: in the data used for our study 70% of those who reported having at least monthly F2F contact with their parents, have also visited them at least once a month, during the previous twelve months. Maintaining this contact depends strongly on the effort one invests in travelling and in hosting. For a single visit to take place, the effort required from both sides is inherently asymmetric, where one side needs to be mobile and travel while the other needs to have the facility to host. It might be that this effort is not reciprocated – one side might visit more often than the other. The division of effort between hosting and visiting could be related to expectations adult children and parents have from each other and on prevalent norms about intergenerational relationship, but it could also vary according to the specific circumstances of the family. This paper aims to enrich our understanding of intergenerational contact by looking beyond the frequency of contact. We focus how balanced visiting and hosting are and how the balance is influenced by specific family characteristics and needs.

We use a sample of 1,419 individuals and their parents from the 2009 wave of the Mobility in Social Networks module of the Longitudinal Internet Studies for the Social sciences (LISS) panel[1], a dataset from the Netherlands, which was designed for studying family visits. We address two questions: first, what is the balance of visiting and hosting between adult children and their parents? Second, to what extent do family network configuration, household mobility, and different family and personal needs such as the need for support or childcare influence relative frequency of visiting and hosting among parents and their adult children (i.e. visiting balance)? We define relative frequency as the ratio of the frequency in which adult children visit their parents and the frequency in which they host them. We apply a linear regression model to quantify the relationship between individual, dyadic and family characteristics and relative frequency.

2. Background

Variations in relative frequency of visiting and hosting

Researchers of intergenerational contact and support have argued that underlying these are general behavioural mechanisms, most notably reciprocity (Silverstein et al., 2002; Grundy, 2005). Reciprocity, the giving and taking within an exchange relationship, between parents and children has been researched from various perspectives. Evidence for reciprocity in intergenerational relationships has been found in different contexts and it has been shown that it varies by the type of exchange. Grundy (2005) looked into reciprocity in the provision of instrumental help, such as help with money and help in household chores. She found in Britain a positive relationship between

[1] The LISS panel is collected by CentERdata – http://www.centerdata.nl

providing and receiving help in general, but help provided from the child to a parent had a weaker effect on the likelihood for parent-to-child money transfers. Henretta and his colleagues (1997) have found a positive relationship between past parent-to-child money transfers and present child-to-parent assistance provision. Silverstein and colleagues (2002) concluded that the time children spend with their parents is proportional to the time investment earlier made by the parents. Hence intergenerational support reciprocity might not be synchronic but spread over a long period of time. Similar could be argued based on the filial responsibility perspective, which postulates that parents expect children to make an effort in attending to their needs as a return on the parents' earlier investment in their children's upbringing (see Lee et al., 1994; Connidis, 2010).

Attention has also been given to other motivations for contact and support within the family. Altruism is observed when for example adult children help their parents according to the parents' current needs irrespectively of past transfers (Silverstein et al., 2002). Others have suggested that parents have a greater feeling of obligation towards their children and take more interest in their lives than vice versa (Rossi & Rossi, 1990; Lye, 1996).

All these pathways and mechanisms of parent-child relationships point out that at a given point in time adult-children and their parents do not necessarily engage in travelling for visiting to the same extent. Adult-children might feel they are expected to visit their parents as a return for past parental effort and parents might use visiting as a way to actively engage in their child's life. Furthermore, like other types of exchange in the family that change over the life course, the visiting and hosting balance is not necessarily constant across different situations (Komter & Schans, 2008). The life course paradigm (Elder, 1994) stresses that individuals may simultaneously occupy different roles with diverging requirements and expectations (Macmillan & Copher, 2005). This has implication for the way in which interaction within the family takes place. An adult child who is also a parent may have a different obligations, needs and norms to adhere to than an adult child who is not a parent. Therefore it is necessary to take into account various dimensions that may lead to variations in visiting and hosting patterns.

Family network configuration

We analyse three dimensions of the family network: its size, its geographical distribution and its composition in terms of gender. Previous research indicated that siblings have an impact on the adult child's relationship with his or her parents (Silverstein & Giarrusso, 2010). Having a sibling who lives close to the parents is positively associated with the adult child's geographic proximity to the parents (Michielin et al., 2008; Smits, 2010) and negatively with their contact frequency (Lye, 1996; van Gaalen et al., 2008). There is also evidence that support exchange between parents and an adult child declines when another sibling is closer to the parent (Mulder & van der Meer, 2009). In general, larger number of siblings is associated with a decline in tangible and emotional resource flow from parents to their children (Downey, 1995). The number of sisters that adult-children have was found to have a negative influence on the amount of support given in both directions: from adult-child to parents (Tolkacheva et al., 2010) and from the parents to the adult-child (Goodsell et al., 2013). Specifically for contact, Spitze & Logan (1991) found that adult-children without siblings see their parents more and that the more siblings an adult-child has the less F2F or phone contact he or she have with their parents. Given that travelling is a time-intensive activity, having additional siblings means more competition for limited parental time. With more siblings parents need to divide their travel resources among more children. Thus, we expect that parents to dedicate less time travelling to a specific adult-child when more alternatives are available. The availability of siblings would also increase the possibility for joint family meetings, which we expect to take place at the parental home. Having a sibling should therefore lead to an increase in adult child's frequency of visits relatively to the frequency of visits made by the parents.

We also expect that the geographic distance between siblings and parents would have an effect. If a sibling lives close to the parents, this should lead to an increase in the adult child's frequency of visits

to parents relatively to the frequency of the adult child hosting them. This is based on the expectation that when seeking intergenerational contact the parents will choose for the nearest alternative. In the reverse case, when the sibling lives close to the adult child we expect an increase in the parents' frequency of visits relatively to the frequency of visits made by the adult child, as a result of the siblings' geographic concentration. We do not expect that distance between the adult child and his/her parents in itself will have an effect on the relative frequency of visiting and hosting, as, all else equal, distance should not have an asymmetric influence on the ability to travel.

Significant impact of the network's gender composition on intergenerational contact has been found for the behaviour of parents as well as that of the adult-child. Studies have repeatedly addressed the kin keeping role of women (van Gaalen et al., 2008) in the family network. Rossi & Rossi (1990) found mother-daughter social interaction to be more stable across the life course and with higher frequency of contact than father-son interaction. Lawton et al. (1994) found that relative to males, females have more frequent contact with mothers. No differences were found for contact with fathers. When it comes to providing care and support for parents, researchers consistently observed higher level of provision by daughters than by males (Spitze & Logan, 1990; Silverstein et al., 2006; Mulder & van der Meer, 2009; Silverstein & Giarrusso, 2010). From the perspective of visiting balance, because maintaining contact and providing support within the family is done more by females, we expect to find two effects: that relative to sons, daughters visit their parents more than host, and that relative to fathers, mothers visit their children more than host.

Instrumental support and childcare needs

In earlier research it was found that children and parents move closer to each other when instrumental support needs arise (Rogerson et al., 1997), and the person that is in need tends to make the move (Smits, 2010). However when it comes visits achieved by travel mobility we expect the contrary: that those providing support are the ones responsible for travelling and those that are receiving support are the ones hosting, because instrumental support, such as helping with work around the house, is mainly provided in the home of the receiver. Another dimension we address is the health status of the parents, which was shown to have an effect on intergenerational contact. Travelling requires some physical ability to move and cannot be performed by everyone. In addition, having a disability may require additional in-home care provision. Therefore, we expect that if (one of) the parents suffer from a protracted illness or disability then this will be associated with relatively more visits by the adult child.

An important dimension of intergenerational support is childcare support provided by parents to their adult children when the latter have their own children (see Lye, 1996; Connidis, 2010). We expect that individuals with children will host their parents relatively more than visit them, due to the informal childcare grandparents provide and due to the substantial utility grandparents derive from contact opportunities with their grandchildren (Uhlenberg & Hammil, 1998). We also expect that this effect increases when the grandchildren are very young – if the grandchildren are less than 12 years old, then the grandparents will travel relatively more.

Mobility and accessibility

Cars offer their owners increased flexibility in activity scheduling and an opportunity to travel to more geographically disparate locations (Sheller & Urry, 2000; Dieleman et al., 2002; Bertolini & le Clercq, 2003; Urry, 2007). Therefore we expect that compared with car-less households, a parent or an adult child that own a car will travel relatively more than host.

Living in an urban area is associated with access to various travel modes and to central transportation hubs such as railway stations or motorway junctions. Furthermore, there is evidence

that living in core urban areas is associated with higher level of out-of-home activities (Faber & Paez, 2009). We expect that the node that lives in a highly urbanized area will travel relatively more.

3. Data and Methodology

We use the first wave of the Mobility in Social Networks panel from the Longitudinal Internet Studies for the Social sciences (LISS) project. The data were collected in the Netherlands in 2009 via an internet-based survey. Our analysis sample consists of those respondents who stated that they are between 25 and 65 years old, are the head of household or the head's partner, have at least one parent alive, and do not live with any of their parents. Because detailed data were collected for not more than three siblings per respondent, we removed all respondents who reported having four or more siblings. The final sample consists of data on 1,419 child-parent dyads.

Each respondent reported on their own residential location in 4-digit postal code and on the location of their parents and their siblings. We combined these data with the distance matrix from the National Accessibility Map[2] (*Nationale Bereikbaarheidskaart*) that enabled us to calculate road distance between every pair of postal codes.

Dependent variable: Relative Frequency

The dependent variable in the OLS regression analysis is relative frequency (RF) which is constructed by using the answers for two questions: "When you saw your parents how often in the past 12 months did that occur at their home" and "When you saw your parents how often in the past 12 months did that occur at your own home". Answers to both questions were given on an ordinal 7-point scale of frequencies, which was then transformed into a continuous scale of number of annual meetings (values were taken from van Gaalen et al., 2008): never (0), once (1), a few times (4), at least once a month (12), at least every week (52), several times a week (156), every day (300). Subsequently, visiting frequency (f_v) was divided by the hosting frequency (f_h) and then linearised by taking the natural log of the quotient to give the following statistic of RF[3]:

$$RF = \ln(\frac{f_v}{f_h})$$

The variable captures the direction and the size of the visiting asymmetry: respondents who visit much more often than host have a higher RF than respondents with a smaller imbalance. Respondents who host more than visit have a negative value of RF. The RF value of zero (the natural log of 1) is attached to respondents with symmetric visiting and hosting balance, i.e. equal visiting and hosting frequencies.

In this study we chose to use the perspective of the child in the intergenerational dyad. We have done so because our dataset included important variables on the parent-child relationship from this perspective only. Earlier research has found that there might be systematic differences between the way parents and children assess their support exchange (Kim et al., 2011). Individuals tend to overestimate the help they are providing, while they down-play the help being received. This might be a source for bias in our results. To check the possibility for such a bias we performed a limited analysis by using a sample of parents who reported on their contact patterns with their children (N=918) and a limited number of variables that were available to us.

Independent variables

[2] These data were produced by Goudappel Coffeng- http://www.bereikbaarheidskaart.nl/

[3] To avoid problems related to zero frequencies, for respondents that reported "never" hosting and/or visiting we imputed a value 0.25 instead of the zero value, which is in line with the ratio between the other frequency levels. We tested the sensitivity of the results to this value and did not find differences in significance, size and sign of the reported effects.

Family network configuration: was measured as whether the adult child has siblings and whether these siblings live close to the parents and /or the adult child. We distinguished between five cases (see Figure 1): Case 1 is the reference case in which the adult child has no siblings, case 2 represents a dispersed family where all siblings live farther than 5 kilometres of the parents and of the adult child, case 3 is a clustered family where there is a sibling within 5 kilometres of the parents and of the adult child, case 4 is in which the sibling lives in proximity (5 kilometres or less) to the adult child but not to the parents and case 5 is in which the sibling lives in proximity to the parents but not to the adult child. We also present results for distances other than 5 kilometres (see Figure 2). We control for gender of the adult child and the gender of the parent in cases where only one parent is living in the parental household. In addition, we control separately for the road distance between adult children and their parents in categories: living within same postal code (reference), 1-5km, 6-10km, 11-20km, 21-50km, 51-100km and more than 100km.

Instrumental support and childcare needs: Four cases of instrumental support exchange were included in the model: receiving support from parents; providing support to parents, both receiving and providing; neither receiving nor providing support (reference). Types of instrumental support which were included in this categorization are: household works (cooking, cleaning, laundry and groceries) and practical matters (for example, home repairs, transport of items or "giving a ride"). A person is said to be receiving or providing instrumental support if support was exchanged in the three months preceding the survey and if the adult child indicated that it occurred several times in the three months preceding the survey[4].

The father's and mother's health was measured using a dummy variable that indicated if either one of the parents suffers from protracted diseases, afflictions or handicaps.

The need for childcare was measured by the adult child's household composition. Household composition was measured in 5 categories: single, (un)married couple, (un)married couple with children, single with children and other. An extra dummy variable indicated whether in the household there is a child under 12 years old.

Mobility and accessibility: was measured using one binary variable for car ownership by the adult child (reference: no) and one for car ownership by the parents, a binary variable for an adult child living in an area with an address density of more than 1500 per square kilometre (reference: other areas) and a similar one for the parents. In the final paper we will also include an interaction term between car ownership and living in a highly urbanized area.

Additional Control variables: Age of the adult child was included using four categories: 25-34 (reference), 35-44, 45-54, 55-65. The age of the (youngest) parent was also included using four categories: younger than 65 (reference), 65-74, 75-84, 85 and older.

As no reliable measures for personal and household income of the adult child were available, we controlled for a set of related indicators. Level of education, which was measured in three levels: low (completed primary school or intermediate secondary school, reference), medium (completed higher secondary education or intermediate vocational education) and high (completed high vocational education or university). Work status was coded using a dummy variable for having a job (either as employee or as a self-employed) or not (reference: no job). Lastly, a dummy for living in an owner-occupied home (reference: other situation).

Finally, to account for the routine of visiting or hosting parents two variables were included: the first is the median frequency of hosting other family network members by the adult child – the median answer for the annual number of visits made by parents in-law, (up to three) children of the adult child and two friends or relatives with whom the adult child has regular contact. The second variable is the median frequency of visiting these network members.

4. Results

Descriptive statistics

[4] These data was taken from the LISS Family and Household module

Descriptive statistics are presented in Tables 1 and 2. The main result from Table 1 is that in our sample 47.1% adult children report visiting their parents more frequently than hosting them. Only 15.1% report the opposite, and 37.1% visit and host in equal frequency. The mean value of RF is 0.9 (Table 1) which also implies more visits by adult children than hosting. These results suggest that indeed, intergenerational visits tend to be imbalanced and adult children travel more.

Results of the OLS regression models are presented in Table 3: Model 1 contains only variables that measure family network configuration, instrumental support (including parental health) and mobility/accessibility. Model 2 includes childcare needs and the socio-demographic control variables. Most results hold for both models in terms of sign, size and significance. The only exceptions to this are the variables: *Adult child lives in urban area* and *mother lives alone*, which are significant in model 1 but insignificant in model 2.

Family network configuration

We find that having a sibling (cases 2-5) is positively associated with RF compared with being an only child (case 1, see Figure 1), i.e. adult children with siblings visit relatively more than host. The only exception is case 4, in which the sibling lives far from the parents but close to the adult child.

Regarding the sibling's residential location we find that when the sibling lives close the parents (cases 3 and 5) the adult child visits his/her parents relatively more compared to all other cases. There are no significant differences in the size of effect on RF between case 2 (sibling lives far from parent and adult child) and case 4 (sibling lives close to the adult child but not to parent).

To test for the robustness of these results we estimated alternative models in which the distance between the family members was set for values between one and 20 kilometres (see Figure 2). As expected, the effect of case 2 decreases with distance (i.e. having a sibling far away becomes similar to the reference case of being an only child) from 0.42 and significant to 0.25 and insignificant. The effect of case 4 remains insignificant, and the effects of cases 3 and 5 remain positive and significantly large compared with other cases.

Unexpectedly we could only find minor gender effects. In both models the gender of the adult-child is not significantly associated with RF: there is no difference in visiting balance between sons and daughters. In model 1 we do find that when the parent is a mother living on her own then the adult-child hosts her more than visits. A model which includes an interaction between the gender of the parent and of the adult-child did not yield different results.

Instrumental support and childcare needs

We find that if the adult child provided a parent with frequent instrumental support in household works and in practical matters then that is positively associated with RF. This association is symmetrical to the case in which the parents provided frequent support to the adult child. As expected, there is no significant difference between the case in which the adult child and the parents provided each other with mutual instrumental support and when there was no exchange of instrumental support.

In model 2 we find a strong indication that childcare needs are associated with RF. When there are young children in the household then adult-children host more than visit. Relative to the reference case of being single, when adult-children have children of their own then they host more than visit. In addition, when the (grand)child in the household is younger than 12 years old then as expected the (grand)parents visit more.

Mobility and accessibility

We could only find some indication that living in an urban area is associated with more travelling. In model 1 when the adult-child lives in an urban area he or she visits more than host. While in model 2 these variables are insignificant, their sign is as expected: positive for the adult-child and negative for

the parents.

When parents are car owners then this is as expected negatively associated with RF: they visit their adult-child more than host. However the same effect is not detected for when the adult-child is a car owner. This does not seem to have a significant association with RF.

Additional results

The age of the adult child and that of the parent are non-linearly associated with RF. For the adult child we find that relative to the age group 25-34, the oldest group (55 to 65) is not significantly different, while the age group between 35 and 54 is negatively associated with RF. This may be due to the greater need for support at home (e.g. with childcare) during the middle years. For the age of parents we find that the two oldest groups (parents aged 75 and older) are associated with more hosting than travelling (by the parent), suggesting that during this period the support needs and mobility limitations increase, which leads to more travelling by the adult children. Education, homeownership and employment status are not significantly associated with RF.

Results from the parents' perspective

The results above are based on the answers given by adult-children about their relationship with their parents. To check for a possible bias in the adult-children's reporting of visits, we analysed the answers of a sample of parents, with out-of-home living adult-children age 25-65. The reader should note that this is a separate sample – we could not match the parents in the main sample to the parents in this analysis. The distribution of RF is similar to the one reported above: 42.5% of the sample reports that the adult-child visits more frequently than hosts and only 12.6% report the opposite. This confirms the earlier finding that on average adult-children travel more. In the regression analysis we find that when the adult-child has at least one sibling he or she visits more, as we found in the adult-children's sample. However we did not find a significant association with the location of the sibling. Furthermore we find that when the parent does not have a partner, he or she travels more than hosts. While in the adult-children's sample this association was found only for mothers, in the parents' sample this association is significant for both mothers and fathers. The effects of age and health are similar to the ones reported earlier. To conclude, we do not find significant evidence for a bias in the adult-children response.

5. Preliminary conclusions

To answer the question we started with, we find that children visit their parents substantially more than host them – almost half of our sample follow this pattern, but there are variations to this general finding. We find that in line with expectations, parents visit a specific child relatively less when another child is available. This is also in line with theories that predict a decline in parental resource flow (in our case: travel effort) per child when the number of siblings increases (Steelman et al., 2002). Furthermore, our expectations regarding the influence of siblings' residential location were only partly confirmed. On the one hand, as expected, the concentration of the family network around the parental location indeed generates more visits by the adult child. On the other hand, it seems that the residential location of an additional sibling is associated with RF, but only to the extent of the sibling's distance to the parents and not to the adult child. These results suggest for the importance of looking at the wide family network for understanding contact frequency. They may also provide an indication that RF is not related to distance and concentration of network members in general, but to the concentration specifically around the parental home, which acts as the focal point for the family.

With respect to instrumental support, as expected, we find consistent evidence that support needs lead to more visits by the family member providing the support. We see that in the estimates of the variables that measure support provision and health directly, but also in variables that are indirectly related to instrumental support provision such as adult child's age, age difference and age of parents.

The results give also an indication for the effort (grand) parents put into the relationship with their grandchildren by travelling to visit them: we find that the need for childcare and the need of grandparents to be in touch with their grandchildren seem to be a "pull" factor for parents to visit more their adult children, both in line with expectations. Further research is required to see how grandparents negotiate their desire for providing childcare with their own aging related travel constraints.

Finally, we find that the mobility opportunities offered by owning a car and by living in urban areas has some influence on the number of visits relatively to the number of times hosting, as expected.

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Table 1: Descriptive statistics of Relative Frequency (RF)

Mean	0.9
SD	1.9
Distribution (in %):	
— <0	15.1
— =0	37.1
— >0	47.9

Table 2: Descriptive statistics for categorical variables

		% within variable		
VARIABLE	N	RF<0	RF=0	RF>0
Total	1,419			
Family network configuration (5km)				
— Case 1	153	22.9	37.9	39.2
— Case 2	521	15.9	39.7	44.3
— Case 3	352	14.8	30.7	54.6
— Case 4	71	14.1	50.7	35.2
— Case 5	322	10.6	36.3	53.1
Instrumental support				
— No support exchange	901	13.3	44.7	42.0
— Respondent provides and receives support	94	25.5	29.8	44.7
— Respondent receives support	119	35.3	30.3	34.5
— Respondent provides support	305	9.2	19.3	71.5
Parents have illness/disability	752	13.0	33.9	53.1
Parents do not have illness	667	17.4	40.6	42.0
Adult child owns a car	1,053	15.6	36.3	48.2
Adult child does not own a car	366	13.7	39.3	47.0
Parents own a car	1,019	17.4	41.5	41.1
Parents do not own a car	400	9.3	25.8	65.0
Parents live in urban area	316	15.8	30.4	53.8
Parents live in other areas	1,103	14.9	39.0	46.2
Adult child lives in urban area	657	13.1	37.8	49.2
Adult child lives in other areas	762	16.8	36.5	46.7
Adult child is female	836	15.6	35.3	49.2
Adult child is male	583	14.4	39.6	46.0

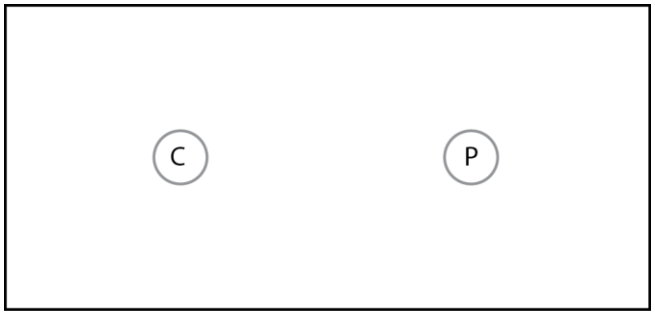
Adult child's age				
— 25-34	334	11.4	37.7	50.9
— 35-44	504	20.2	44.4	35.3
— 45-54	420	15.6	34.1	50.0
— 55-65	161	4.4	20.5	75.2
Parent's age				
— Younger than 65	410	14.9	41.2	43.9
— 65-74	439	21.0	42.4	36.7
— 75-84	401	12.2	34.9	52.9
— 85 and above	169	7.1	18.3	74.6
Adult child's household				
— Single	256	8.2	27.0	64.8
— Has partner	388	7.7	38.9	53.4
— Has partner and children	697	20.4	40.2	39.5
— Single with children	70	27.1	32.9	40.0
— Other	8	25.0	37.5	37.5
Adult child has child under 12	509	22.8	45.8	31.4
Adult child has no child under 12	910	10.8	32.2	57.0
Adult child's education level				
— Low	315	15.9	32.7	51.4
— Medium	557	15.4	37.3	47.2
— High	547	14.3	39.3	46.4
Adult child is home owner	1,128	15.6	38.6	45.8
Adult child is not home owner	291	13.1	31.3	55.7
Adult child is employed	1,152	15.6	37.4	47.0
Adult child is not employed	267	12.7	35.6	51.7
Parental household				
— Mother and father together	749	14.8	39.9	45.3
— Father lives alone	194	16.0	42.3	41.8
— Mother lives alone	476	15.1	30.5	54.4
Distance adult child-parent (km)				
— 0 km (same postal code)	253	21.0	33.2	45.9
— 1-5 km	330	16.7	29.4	54.0
— 6-10 km	180	18.3	32.2	49.4
— 11-20 km	137	11.7	43.1	45.3
— 21-50 km	192	12.0	37.5	50.5
— 51-100 km	168	9.5	47.6	42.9
— More than 100km	159	`11.3	47.8	40.9

Table 3: Results for OLS regressions; dependent variable: RF		
VARIABLES	(1)	(2)
N	1,419	1,419
R-squared	0.150	0.286
Family network configuration	0.307*	0.441***
(ref= Case 1)		
— Case 2	(0.165)	(0.155)
	0.568***	0.609***
— Case 3	(0.175)	(0.172)
	0.117	0.165
— Case 4	(0.258)	(0.243)
	0.519***	0.657***
— Case 5	(0.177)	(0.172)
Instrumental support		
(ref=No support exchange)		
— Adult child provides and receives support	-0.165	-0.302
	(0.195)	(0.185)
— Adult child receives support	-0.556***	-0.525***
	(0.176)	(0.168)
— Adult child provides support	0.843***	0.622***
	(0.127)	(0.122)
Parents have illness/disability	0.311***	0.285***
	(0.098)	(0.092)
Adult child owns a car	0.094	0.150
	(0.110)	(0.105)
Parents own a car	-1.072***	-0.830***
	(0.131)	(0.131)
Adult-child lives in urban area	0.192*	0.067
	(0.103)	(0.099)
Parents live in urban area	-0.055	-0.097
	(0.146)	(0.137)
Adult child is female	0.038	0.001
	(0.097)	(0.095)
Parental household		
(Ref=Mother and father together)		
— Father lives alone	-0.135	-0.166
	(0.159)	(0.149)
— Mother lives alone	-0.288**	-0.206
	(0.141)	(0.133)
Adult child's age (ref: 25-34)		
— 35-44		-0.453***
		(0.148)
— 45-54		-0.759***
		(0.206)
— 55-64		-0.256
		(0.269)
Parents' age (ref: younger than 65)		
— 65-74		0.045
		(0.141)
— 75-84		0.395**
		(0.189)
— 85 and above		0.934***
		(0.255)

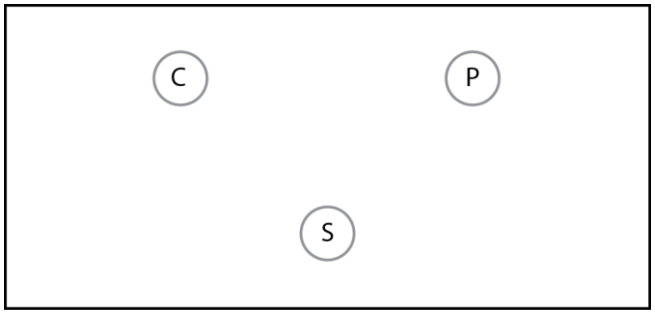
Adult child's household (Ref=Single)		
— Has partner		-0.601***
		(0.141)
— Has partner and children		-0.510***
		(0.152)
— Single with children		-0.451*
		(0.240)
— Other		-0.761
		(0.600)
Adult child has child under 12		-0.413***
		(0.129)
Adult child's education level (Ref=Low)		
— Medium		-0.165
		(0.121)
— High		-0.047
		(0.128)
Adult child is home owner		-0.098
		(0.122)
Adult child is employed		-0.142
		(0.121)
Distance adult child-parent (ref=Living in the same postal code)		
— 1-5 km		0.179
		(0.142)
— 6-10 km		-0.212
		(0.180)
— 11-20 km		0.151
		(0.196)
— 21-50 km		0.029
		(0.183)
— 51-100 km		0.002
		(0.192)
— More than 100 km		-0.192
		(0.195)
Median hosting frequency of other relatives		-0.485***
		(0.053)
Median visiting frequency of other relatives		0.520***
		(0.055)
Constant	0.913***	1.617***
	(0.247)	(0.378)

Standard errors in brackets; ***significant at 0.01 level; **0.05 level; *0.1 level

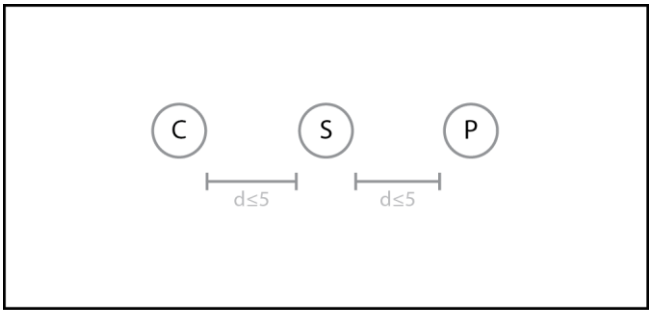
Figure 1: Family network configuration
C – adult child; P – parent; S - sibling



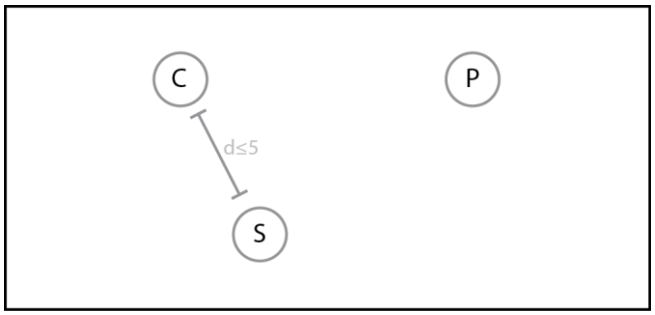
Case 1: Adult child is an only child (reference)



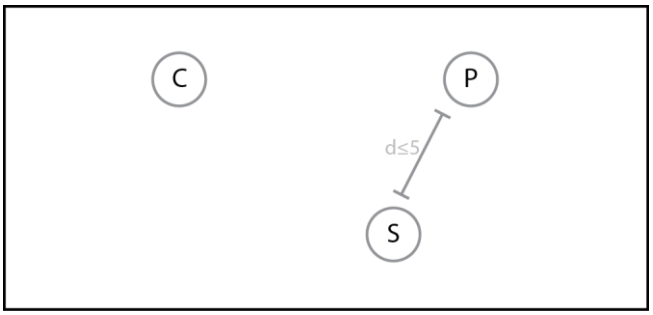
Case 2: Sibling lives far from adult child and parents



Case 3: Sibling lives within 5km from adult child and parents



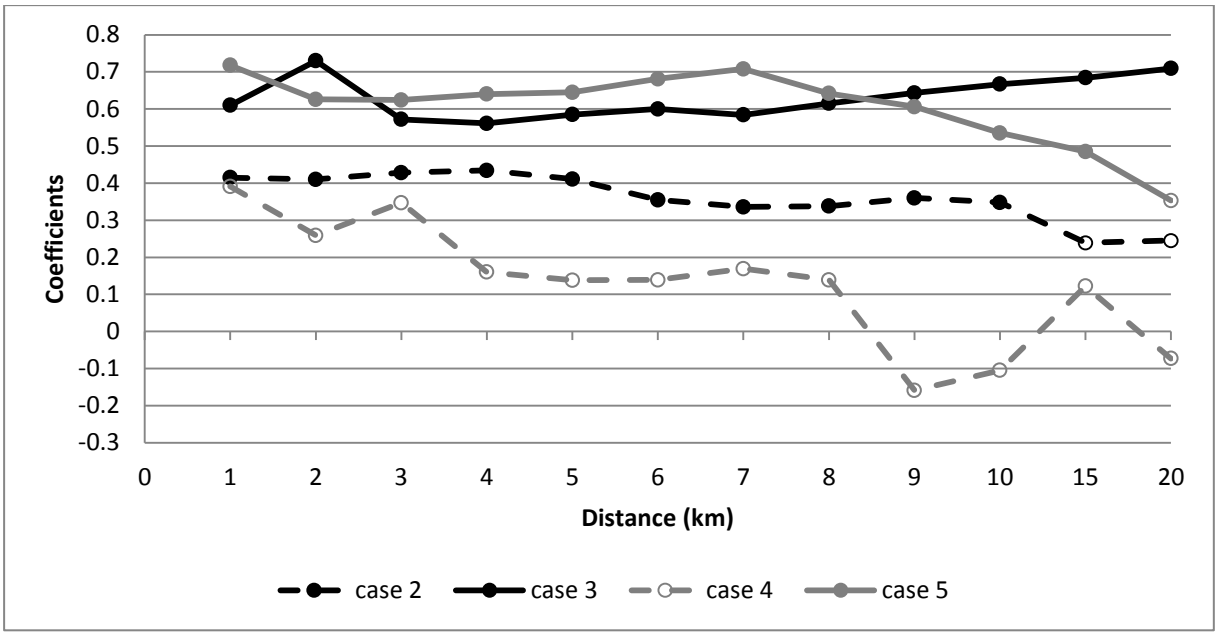
Case 4: Sibling lives within 5km from adult child



Case 5: Sibling lives within 5km from parents

Figure 2: Robustness test for family network configuration (Reference: case 1)

Hollow points mark insignificant coefficients; all other points are significant at $p<0.05$


0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
Coefficients
0
1
2
3
4
5
6
7
8
9
10
15
20
Distance (km)
case 2
case 3
case 4
case 5