How Mothers Allocate Support Among Adult Children: Evidence From a Multiactor Survey

Matthijs Kalmijn

Department of Sociology and Anthropology, University of Amsterdam, the Netherlands.

Objectives. Using a within-family perspective, we examine how mothers allocate support among their adult children, and we test alternative theories about support exchange.

Method. We use a large-scale multiactor survey from the Netherlands in which mothers and children were interviewed independently. We analyze sibling pairs (aged 36 on average) who were connected to 604 mothers (aged 63 on average). Fixed effects regression models and instrumental variable models are used to examine effects of child characteristics on received support.

Results. Mothers give more support to the child who lives without a partner, has children, has health problems, and is lower educated than to the child who does not have these characteristics. Children who more strongly support filial norms also receive more support. Support given to one child has a small positive effect on the support that the mother gives to the other child.

Discussion. The analyses provide new and supportive evidence for the notion that parents are altruistically motivated. At the same time, older parents are motivated by exchange because they invest more in children who are more likely to reciprocate. Some evidence exists for the norm of equality.

Key Words: Care—Children—Filial norms—Intergenerational exchanges—Parents—Resource dilution—Siblings—Similarity—Social support—Solidarity.

THE degree to which parents and adult children give each other instrumental, socioemotional, and financial support continues to be an important topic in research on aging and intergenerational relations (De Jong-Gierveld & Dykstra, 2008; Deindl & Brandt, 2011; Fingerman et al., 2011; Grundy, 2005; Ha, Carr, Utz, & Nesse, 2006; Kalmijn, 2007; Kunemund & Vogel, 2008; Silverstein, Gans, & Yang, 2006; Suitor, Sechrist, & Pillemer, 2007; Szinovacz & Davey, 2008). A key finding in this literature is that although children provide considerable support to elderly parents, parents continue to support their adult children even when they are quite old. When studying the support that parents give to adult children, it is interesting to make comparisons of the support that different children receive within the same family (Suitor, Pillemer, & Sechrist, 2006). Because most parents have multiple children, and because there are costs involved in giving support, parents are typically confronted with a problem of allocation. Do they give all children the same amount of support, or do they differentiate between the children? And if they differentiate, how do they do that and what motivates them to do so?

There are several reasons why it is important to study the allocation of support within families. First, research has shown that parents often treat their (young and adult) children differently and that this may have important repercussions for child outcomes such as well-being and mental health (McHale, Crouter, McGuire, & Updegraff, 1995; Pillemer, Suitor, Pardo, & Henderson, 2010; Richmond,

Stocker, & Rienks, 2005; Volling & Elins, 1998). Second, although there is differentiation, there is also a positive correlation between the support that multiple children receive (Fingerman, Miller, Birditt, & Zarit, 2009). This correlation may either stem from common underlying family characteristics or from a tendency of parents to equalize across children. Third, there are competing theories about intergenerational support, in particular theories about altruism, reciprocity, and competition. By studying within-family differences in support, these theories can be tested more conclusively (Altonji, Hayashi, & Kotlikoff, 1992). For example, if we can show that mothers give more support to the child from whom they expect more support than to the child from whom they expect less support, this would be stronger evidence for exchange than a correlation between upward and downward support streams across families. This latter correlation may be biased by common family characteristics (e.g., familialism).

Originally, the allocation of support among adult children was rarely studied in the literature on intergenerational relationships. Studies typically focused on a single child, for example, the child with whom contact was most frequent or the child who lived closest. Recently, an increasing number of studies have taken a within-family perspective. First, there is the pioneering study of Suitor and coworkers (2006) of 556 older mothers in the Boston area. Using fixed effects models, Suitor and coworkers find that children who were single and had health problems received more support

than their married and healthy siblings. Moreover, they find that mothers gave more support to the child who gave them more support. In a later but similar study of 633 middle-aged parents in the Philadelphia area, Fingerman and coworkers (2009) found that children with more personal problems received more support, while at the same time, children whom the parents perceived as more successful in life received more support as well. Third, in a within-family analysis of the Survey of Health, Aging, and Retirement in Europe, Leopold and Raab (2011) showed that parents provide more financial transfers to the child who helped them most with personal care or practical things (Leopold & Raab, 2011). All three studies provide important new evidence on explanations of support in terms of altruism on the one hand and exchange on the other hand.

In this article, we re-examine how mothers allocate support among their children, using a new multiactor survey. We build upon prior studies but also introduce a number of new elements. First, we use data in which mothers and children were interviewed. This not only allows us to include a more elaborate set of measures for the children, it also has the advantage that the children themselves report on the support they receive and not the parents. This is important because parents may differentiate too little when they report about what they give to their children (Lye, 1996; Mandemakers & Dykstra, 2008). Second, we examine notions of altruism and reciprocity in a novel way, and we examine additional hypotheses on equality norms and competition. The focus is on support from mothers because mothers are the primary caregivers and kinkeepers, not only when the children are young but also when the children are older (Hagestad, 1986).

Background and Hypotheses

Exchange and Reciprocity

Our first hypothesis is based on the notion that parents and children support each other because they receive something in return (Silverstein, Conroy, Wang, Giarrusso, & Bengtson, 2002). Exchange can be instantaneous, which means that parents and children give each other different forms of support at the same point in time (e.g., parents help their children with practical things around the house and receive attention in return). Exchange can also be intertemporal, which usually means that parents give something to their children at a young age in the hope that they will be supported by their children when they are old. Intertemporal exchange is made possible by the norm of reciprocity which reduces the uncertainty that people would have about whether or not they would receive something back.

Exchange theory has often been tested by showing that the support older parents receive is positively affected by the support parents give to adult children (Grundy, 2005; Klein Ikkink, Van Tilburg, & Knipscheer, 1999). Other studies have pointed to the reverse effect: the support children receive is positively affected by the support children

give to elderly parents (Leopold & Raab, 2011; Suitor et al., 2006). These cross-sectional designs point to instantaneous exchange but they are not clear about the direction of the exchange. Authors have also used longitudinal designs and have shown that the support children received from parents at an earlier point in the life course has (small) positive effects on the support children later give to parents (Silverstein et al., 2002). This is evidence of intertemporal exchange although it still leaves open the question of whether parents are motivated by exchange; it primarily shows that children reciprocate. A recent Swedish study shows that parents give more money to children when at an earlier point in time, they received more visits from these children, suggesting that parents too are motivated by exchange (Lennartsson, Silverstein, & Fritzell, 2010).

We test the exchange perspective in a somewhat different fashion. Based on notions of intertemporal exchange and reciprocity, we argue that older parents are more likely to help the child from whom they can expect something in return. In other words, we posit that parents are motivated by exchange and we argue that this also occurs when the children are older, and not only early in the child's life course, as has been the classic argument. To test this, we look at filial norms of the child. With filial norms, we refer to the normative obligations that children feel toward helping their parents (Gans & Silverstein, 2006). Research has shown that children who endorse these norms are more likely to support their parents (Gans, Silverstein, & Lowenstein, 2009). Hence, it is plausible that parents believe that the support they give to the child with the strongest filial norms is most likely to be reciprocated.

This alternative way of testing exchange is based on assumptions, like all designs to study exchange. First, it assumes that parents know the norms of their children. This is plausible because parents themselves try to teach children these norms when the children are young (De Vries, Kalmijn, & Liefbroer, 2009). Second, it assumes that the norms of the children are not the result of recent parental transfers. There is a chance that children bring their norms in line with what their parents give them, although this is more likely during the formative ages when most norms and values are formed. Panel data would be better suited to rule this out, but most panel data do not allow us to use a within-family design.

Altruism and Need

Critics of the exchange perspective have argued that even though selfish concerns may play a role in some relationships, they are less likely to play a role when the relationship is more personal and more intimate (Batson, 1993). In personal relationships, it is believed that altruism rather than selfishness motivates what people do for each other. A common definition of altruism is that people add the utility of others in their own utility function when deciding how to act (Kolm & Ythier, 2006a, 2006b). In this theory, parents

are said to help their children because this provides benefits to their children, and hence, to the parents. Altruism can be explained in biological and psychological terms. The biological perspective emphasizes the successful reproduction of altruistic genes across generations, whereas the psychological perspective emphasizes the emotional side benefits of helping (Piliavin & Chang, 1990).

Most survey researchers have tested the notion of altruism indirectly by examining how the needs of parents and children affect the support they receive. The underlying assumption is that meeting another person's need makes that other person happier, an assumption which is plausible in most cases. Empirical research has provided considerable evidence in favor of this hypothesis when the focus is on what children give to parents. Virtually, all indicators of parental need—e.g., living alone, health problems—increase the support that children give (Davey & Eggebeen, 1998; Hogan & Eggebeen, 1995; Klein Ikkink et al., 1999; Silverstein et al., 2006). Fewer studies have examined how parents respond to the needs of children but those that do, find positive support for the hypothesis as well (Fingerman et al., 2011; Suitor et al., 2006). Additional evidence can be found in economic research on so-called (financial) intervivos transfers. After controlling for effects of the income of parents, it appears that the income level of a child has a negative effect on the chance to receive a financial transfer from parents (Cox & Rank, 1992; Hochguertel & Ohlsson, 2009; McGarry & Schoeni, 1995). Some studies also find positive effects of children's income on money received from parents (Fritzell & Lennartsson, 2005), but these either do not control for parental income or do not compare children within families.

We test the hypothesis that mothers give most support to the child who has the greatest need for support. Following earlier research, we make assumptions about which children need more support. Lower educated children and children without a job or with low-status jobs will not only have more difficulties to make ends meet, but they are also less able to hire third parties such as a household help or a house painter and hence will be more in need of practical support. Next, we assume that children who have children themselves need more support. These children will not only have more need for child care but also more need for all sorts of practical assistance (Silverstein & Marenco, 2001). Because a partner is the most important source of support, we assume that children without a partner may be more in need of support than their siblings who are married or cohabiting (Sarkisian & Gerstel, 2008). Finally, we use children's (mental) health as an indicator of their need assuming that children with health problems need more practical and socioemotional support from their parents.

Equality Norms and Competition

An alternative idea about allocation lies in the notion of equality. Common sense suggests that in most western developed societies, a norm exists that parents should not treat their children differently (Fingerman et al., 2009). This norm is probably based on more general principles of equality in society which can be seen in the norm not to discriminate against ethnic minorities or women. In the present case, equality concerns may be especially salient because parents will try to avoid making their children jealous. Even if parents feel emotionally closer to a certain child, they still may believe it is unfair to give that child more support.

Direct evidence for a norm of equality does not exist but there is some indirect evidence. Economists have shown that despite income differences among children within families, the large majority of parents give all children the same part of the inheritance, even if legal options exist to differentiate (Behrman & Rosenzweig, 2004; Menchik, 1980). This is in contrast to notions of altruism and exchange and is indirect evidence that parents do not want to favorably treat one child over another. The evidence is also in contrast to the research on intervivos transfers which shows that poorer children receive more financial support from parents. Economists have resolved this discrepancy by arguing that parents can conceal financial gifts but not inheritances (Arrondel & Masson, 2006). An alternative explanation is that parents use different allocation principles in different circumstances. Avoiding conflict among siblings may also be an issue for parents but this is closely related to the equality norm just discussed.

Based on the notion of equality, we propose the hypothesis that parents give more support to a child when they give more support to another child. In other words, if parents support a child because this child is in need of support, they try to give support to the other child as well, even if this other child does not need that support. For example, after parents help one child with repairs in the home they may compensate this by paying an extra visit to the other child. Similarly, parents who begin to pay more visits to a child who is sick, may also begin to show extra interest in the well-being of the other children.

An alternative idea is based on the notion of competition. Giving support takes time, and the time parents spend on one child cannot be spent on another child. Many studies in the past have demonstrated that children directly or indirectly compete with each other for the resources of their parents (Downey, 1995; Guo & VanWey, 1999). Based on the notion of competition, we propose an alternative hypothesis: parents give less support to a child when they give more support to another child. Such a negative effect across siblings would especially be expected for the most time-consuming forms of support. Important to note is that the competition hypothesis is based on parents' restrictions, whereas the equality hypothesis is based on their preferences. Parents may want to equalize, but will often be unable to do so.

Data and Methods

We use data from the Netherlands Kinship Panel Study, which is based on a representative sample of the Dutch population (Dykstra et al., 2004b). Respondents were interviewed at home between 2002 and 2004 and filled

out a written questionnaire immediately after the interview (N = 8,161). Of the sampled individuals, 11% were not reached, 51% did not want to participate, and 37% were interviewed. This response rate is similar to other national surveys in the Netherlands. Women, middle-aged persons (aged 40–59 years), married persons, and persons with children were overrepresented (Dykstra et al., 2004a).
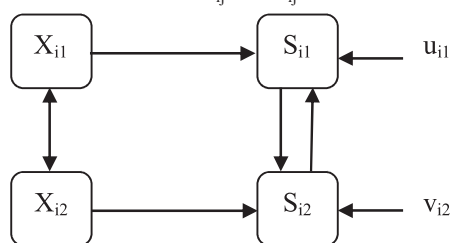
Of the respondents, 34% had (at least) two biological children of 15 years and older (n = 2,809). Two randomly chosen children were sent a written questionnaire. For 71% of the children, we obtained permission to contact the child and 66% of these children returned the questionnaire (Kalmijn & Liefbroer, 2011). Fortunately, the response of children within families is correlated (OR = 5.92, p < .01) so that nonresponse at the family level is not fully cumulative. Children who respond on average have better relationships with their parents than children who do not respond but analyses show that this does not lead to selection bias in the effects of well-known predictor variables on support exchange (Kalmijn & Liefbroer, 2011).

We have 1,022 pairs of responding children. To be included in the analysis, both children needed to be living independently. Furthermore, the mother either needed to be the respondent or the respondent's partner. This leaves us with 604 child pairs for the analysis (1,208 children). The average age is 63 for the mothers and 36 for the children. About a third of the pairs were sisters, 20% were brothers, and 48% were mixed.

Design

The first two hypotheses are tested with a fixed effects regression model (Petersen, 2004). In this model, the 1,208 children are the units of analysis, child characteristics are the independent variables, and received support is the dependent variable. The fixed effects model regresses differences between children of the same mother in the support they receive on differences in the characteristics of these two children. For example, a positive effect of education in a fixed effects model would mean that a higher educated child receives more support than his/her lower educated sibling. Because the model only considers differences within families, mother's characteristics are constant and are not included in the model.

To test the last two hypotheses, parallel regression models are run for the two sets of 604 children. The aim is to estimate reciprocal effects: the effect of the support of one child on the support that the other child receives. The following diagram illustrates the model. X_{ij} are individual child characteristics, S_{ij} are support variables, and u_{ij} and v_{ij} are error terms:

Because the error u_{i1} affects S_{i1}, and S_{i1} in turn affects S_{i2}, there is a correlation between u_{i1} and S_{i2}. This violates the assumption of independence of errors and predictors. A common solution for analyzing reciprocal effects in cross-sectional research is to use an instrumental variables model (Messner, Baumer, & Rosenfeld, 2004), a method which has also been used in gerontological research (Calvo, Tamborini, & Sarkisian, 2010). In the instrumental variables model, predicted scores for S_{i1} and S_{i2} are used as independent variables rather than S_{i1} and S_{i2} themselves. Because these predicted scores (or "instruments") are constructed from exogenous variables, they are uncorrelated with the error terms in the equations.

A well-known problem with this method lies in finding good instruments to identify the model (Angrist & Krueger, 2001; Sovey & Green, 2011). Instruments are variables that predict S_{i1} reasonably well but do not affect S_{i2}. In the present case, the search for instruments is less problematic than usual. The needs of child 1 are chosen as instruments because it is plausible that the needs of child 1 do not directly affect the support that child 2 receives. Such an effect could only operate via the support that child 1 receives and not directly. For the same reason, we also use the norms of child 1 as an instrument.

Measures

Support from mothers is measured with six items covering practical support, socioemotional support, and contact (see Table 1 for details of measures and Table 2 for descriptives). We include contact because we think it may measure other, less tangible forms of support. The mother's care of the grandchildren is also considered a form of support. Two scales are constructed, one without child care support (α = .76) and one with child care support (α = .76). For children without children, it is assumed that there is no child care support. We also use two subscales, one for instrumental support (household help and practical help), and one for socioemotional support (giving advice, emotional interest, and contact). The items and scales were standardized by subtracting the mean for all children and dividing by the standard deviation for all children. Financial support was not measured because the measurement is rather crude on this aspect and because we have no income data for the children.

The following demographic characteristics were measured for the child: age, sex, whether the child had children at home, whether the child lived without a partner, and whether the child experienced a divorce or separation. It is plausible that having experienced a divorce may increase the demand for support, independent of a child's partner situation. Three socioeconomic child characteristics were included: the child's level of schooling, the child's occupational status, and the activity status of the child, distinguished in working for pay, attending school, and doing something else.

Two health variables are included. The first is a variable indicating whether the child suffers from a physical or

Table 1. Items and Answering Categories of Scales Used in the Analysis

Scale	Item	Answering categories
Mother's support to child	Helped with household work	Never; sometimes; frequently (past
	Helped with practical tasks	3 months)
	Inquired about personal wellbeing	
	Gave good/helpful advice	
	Taking care of the child's children	(Never if no children)
	Face-to-face contact	Never; once; few times; once a month;
	Telephone and other contact	once a week; few times a week;
		daily (last 12 months)[a]
Depressive symptoms	Felt particularly tense	All the time; very often; often; rarely;
	Felt so down that nothing could cheer you up	very rarely; never (past 4 weeks)
	Felt calm and peaceful	
	Felt downhearted and miserable	
	Felt happy	
Child's filial obligations	Children should look after their sick parents	Fully agree; agree; neutral; disagree; fully
	In old age, parents must be able to live in with their children	disagree
	Children who live close to their parents should visit them at least once a week	
	Children should take unpaid leave to look after their sick parents	
Mother's familialism	When I am troubled, I can always discuss my worries with my family	Fully agree; agree; neutral; disagree; fully
	I place confidence in my family	disagree
	Should I need help, I can always turn to my family	
	I can always count on my family	
	When I am troubled, it is easier to discuss my worries with family than with friends	
	I place greater confidence in my family than in my friends	
	Should I need help, I would sooner turn to my friends than to my family	
	I can count on my friends more than on my family	
Child's schooling	Highest level of completed schooling	Recoded to the approximate years of
		formal schooling
Child's occupational status	Current or previous detailed occupation (open question)	Recoded to the International
		Socioeconomic Index of Occupations

[a]The frequency categories of contact were recoded to approximate midpoints and logged to reduce skewness.

Table 2. Descriptive Information on Variables Used in the Analyses: Children Sample

	N	Mean	SD	Min	Max
Support received from mother					
Overall support scale	1,206	−.01	.99	−2.59	2.21
Overall support scale + child care	1,208	−.01	.99	−2.51	2.36
Practical support	1,200	.00	1.00	−1.12	2.06
Emotional support	1,205	−.02	.99	−3.10	1.98
Child characteristics					
Age of child	1,195	36.25	7.32	19.00	59.00
Child is daughter	1,208	.57	.50	.00	1.00
Child lives alone	1,208	.18	.38	.00	1.00
Child is divorced	1,208	.07	.25	.00	1.00
Child has children aged less than 12 years	1,208	.46	.50	.00	1.00
Child has children aged 12–18 years	1,208	.14	.35	.00	1.00
Child works for pay	1,208	.80	.40	.00	1.00
Child is in school	1,208	.05	.21	.00	1.00
Child's years of schooling	1,201	12.34	2.53	6.00	16.00
Child's occupational status	1,057	54.64	15.23	10.00	90.00
Child has a disability	1,208	.14	.35	.00	1.00
Child depressive symptoms	1,203	−.01	.98	−1.59	5.99
Child's filial obligations	1,206	.01	.99	−2.68	3.18
Distance between child and mother (ln)	1,164	2.51	1.52	.00	5.53
Family characteristics					
Number of children	1,208	2.85	1.11	2.00	9.00
Mother's age	1,208	62.67	8.32	44.00	84.00
Mother's education	1,148	9.54	2.55	6.00	16.00
Mother with partner	1,208	.88	.33	.00	1.00
Father dead	1,208	.12	.32	.00	1.00
Mother's familialism	1,182	−.02	1.01	−4.52	2.36

Note. Means and standard deviations weighted; N values unweighted.

Table 3. Fixed Effects Models for Support Received From Mother

	Model 1		Model 2		Model 3		Model 4		Model 5	
					Overall support + child care				Socioemotional support	
	Overall support		Overall support				Practical support			
	b	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*
Age of child	−.024*	(.010)	−.024*	(.009)	−.022*	(.009)	−.024*	(.010)	−.022*	(.010)
Child is daughter	.515*	(.063)	.539*	(.059)	.552*	(.059)	.416*	(.068)	.520*	(.063)
Child lives alone	.329*	(.087)	.382*	(.083)	.377*	(.082)	.458*	(.094)	.267*	(.087)
Child is divorced	.103	(.121)	.046	(.115)	.074	(.113)	.080	(.130)	.018	(.121)
Child has children aged less than 12 years	.241*	(.071)	.192*	(.067)	.506*	(.066)	.307*	(.076)	.078	(.071)
Child has children aged 12–18 years	−.034	(.104)	−.042	(.099)	−.014	(.097)	.015	(.113)	−.040	(.104)
Child works for pay	.046	(.095)	.068	(.090)	.069	(.089)	.030	(.103)	.072	(.095)
Child is in school	.221	(.193)	.316	(.184)	.311	(.181)	.299	(.208)	.263	(.193)
Child's years of schooling	−.049*	(.017)	−.035*	(.016)	−.031	(.016)	−.043*	(.018)	−.021	(.017)
Child's occupational status	−.002	(.003)	−.001	(.002)	−.001	(.002)	.003	(.003)	−.003	(.003)
Child has a disability	.175*	(.084)	.174*	(.079)	.171*	(.078)	.087	(.090)	.198*	(.083)
Child depressive symptoms	.003	(.031)	.005	(.029)	−.012	(.029)	.057	(.033)	−.027	(.031)
Child's filial obligations	.155*	(.033)	.144*	(.031)	.129*	(.031)	.087*	(.036)	.151*	(.033)
Distance between child and mother			−.191*	(.024)	−.199*	(.024)	−.114*	(.028)	−.208*	(.025)
Constant	1.029*	(.392)	1.279*	(.373)	1.054*	(.367)	1.015*	(.419)	1.264*	(.391)
Variance between families	.528		.468		.450		.516		.477	
Variance within families	.498		.444		.430		.571		.491	
Rho	.515		.513		.511		.475		.493	

Notes. Estimates based on multiple imputation (five imputed data sets). Regression coefficients and standard errors are within parentheses.
*p ≤ .05.

mental disability that "moderately" or "severely" hampers his or her daily functioning. Second, we include a scale of depressed mood based on the five-item mental health inventory test, α = .82 (Berwick et al., 1991). The depression questions refer to the last 4 weeks. Note that the support variable applies to a somewhat longer period (3 months), which is a possible disadvantage.

Filial obligations are measured with five statements about what children ought to do for their parents, for example, "children should visit their parents at least once a month" (De Vries et al., 2009). The scale is the mean of the standardized items (α = .70).

As a control variable, we include the (log of the) geographic distance between mother and child. Because this determinant is partly endogenous, we present models with and without this control variable.

In the instrumental variables model, we included the mother's age, education, partner status, number of children, and familialism. Familialism is a scale of eight items about the degree to which the mother finds family important for support (α = .85).

There were generally few missing values on the independent variables, except for occupational status. Missing values on the independent variables were imputed with multiple imputation in STATA (*mi impute* and *mi estimate*).

RESULTS

We start with a random effects model which allows us to examine how much variance there is within families. Our estimate of ρ is .36 for the overall support scale, which

shows that about a third of the total variance is due to differences between families and two thirds is due to differences within families. ρ can also be interpreted as the correlation between the support that two children receive (Snijders & Bosker, 1999). Hence, there is a positive but only moderate correlation between what two children receive from their mother, or, what is the same thing, there is substantial differentiation within families.

In Table 3, we present the results of the fixed effects regression. We initially look at Model 2 which includes geographic distance. To test the hypothesis on altruism, we focus on the variables indicating the need of the children. We first see that children who are alone receive more support from their mother than their siblings who are living with a partner. This is in line with expectations. The effects are present for the overall scale of support but also for socioemotional and practical support separately. Having been divorced has no additional effect on support received. Next, we see that children who have young children receive more support than their siblings who do not have children. This is observed for practical support and is not significant for socioemotional support. Having older children (aged 12–18 years) does not lead to more support. If we include the mother's child care support in the scale, as is done in Model 3, the effect of young children is stronger. The more interesting finding is that having a child also affects other forms of support received, and not just child care (Model 2).

For the socioeconomic variables, there is partial evidence for the altruism hypothesis. There are significant negative effects of education, showing that mothers are more likely to help the lowest educated child than the highest educated

Table 4. Instrumental Variable Models for Support Received From Mother

| | Model 1 | | Model 2 | | Model 3 | | Model 4 | | Model 5 | |
| | Overall support | | Practical support | | Socioemotional support | | Practical support | | Socioemotional support | |
	B	SE	b	SE	b	SE	b	SE	b	SE
Exogenous variables										
Number of siblings	−.108*	(.023)	−.058*	(.025)	−.116*	(.024)	−.041	(.024)	−.105*	(.022)
Mother's age	−.034*	(.004)	−.038*	(.005)	−.028*	(.004)	−.031*	(.004)	−.023*	(.004)
Mother's years of schooling	.005	(.010)	−.003	(.011)	.008	(.010)	−.003	(.011)	.010	(.010)
Mother with partner	−.114	(.060)	−.047	(.067)	−.145*	(.062)	−.038	(.065)	−.138*	(.061)
Mother's family norms	.112*	(.025)	.071*	(.027)	.123*	(.026)	.052*	(.026)	.122*	(.024)
Child is daughter	.484*	(.049)	.331*	(.055)	.494*	(.050)	.337*	(.053)	.502*	(.049)
Child lives alone	.255*	(.069)	.348*	(.077)	.147*	(.071)	.377*	(.075)	.163*	(.069)
Child is divorced	−.102	(.093)	−.060	(.105)	−.113	(.096)	−.041	(.101)	−.090	(.094)
Child has children aged less than 12 years	.117*	(.051)	.194*	(.057)	.041	(.052)	.206*	(.055)	.046	(.051)
Child has children aged 12–18 years	−.182*	(.074)	−.209*	(.084)	−.130	(.076)	−.207*	(.082)	−.129	(.076)
Child works for pay	−.031	(.068)	.001	(.076)	−.041	(.069)	.011	(.074)	−.029	(.069)
Child is in school	.250	(.134)	.282	(.151)	.180	(.137)	.286	(.148)	.179	(.138)
Child's years of schooling	.007	(.013)	.002	(.014)	.012	(.013)	−.001	(.013)	.010	(.012)
Child's occupational status	.001	(.002)	.001	(.002)	.000	(.002)	.001	(.002)	.000	(.002)
Child has a disability	.048	(.065)	.055	(.073)	.035	(.067)	.065	(.071)	.034	(.066)
Child depressive symptoms	.001	(.023)	.022	(.027)	−.015	(.024)	.026	(.026)	−.013	(.024)
Child's filial obligations	.220*	(.024)	.141*	(.026)	.229*	(.024)	.127*	(.025)	.219*	(.024)
Distance between child and mother	−.197*	(.017)	−.129*	(.019)	−.206*	(.017)	−.120*	(.018)	−.202*	(.017)
Endogenous variables										
Support received by sibling	−.023	(.051)								
Practical support received by sibling			−.088	(.072)					.104*	(.025)
Socioemotional received by sibling					−.013	(.052)	.101*	(.027)		
Constant	2.569*	(.309)	2.545*	(.359)	2.215*	(.306)	2.004*	(.296)	1.800*	(.273)

Note. Estimates based on multiple imputation (five imputed data sets). Regression coefficients and standard errors are within parentheses.

child. This applies only to practical and not to socioemotional support. The educational effect remains when we focus on pairs of children who are both out of school. We do not observe effects of employment and occupational status. We examined gender differences for these variables but did not find any significant interaction effects.

For the variables relating to health, there is more supportive evidence. Children who are suffering from a disability are more likely to receive support from their mother than their more healthy siblings. This applies to socioemotional support only. For depression, there are no effects. We checked to see if the effect of depressive symptoms was linear and found a main effect of $b = .046$ and a quadratic effect of $b = −.036$ (both $p < .05$). The implication of these two effects is an inverted U-shape with the maximum level of support occurring when the depression score is .625. Because about 75% of the respondents are below this point, this shows that support indeed increases with depression for most of the children. After a relatively high level of depression, however, support begins to decline with increases in depression.

To test the hypothesis on exchange, we examine the role of the children's filial norms. When a child is more supportive of the norm that children should help their parents than his or her sibling, he or she is more likely to receive help. These effects are found for both types of support. Hence, the evidence suggests that mothers give most of their support to the child from whom they can expect something in return. This supports the hypothesis of exchange.

In line with previous studies, we find that mothers give considerably more practical and socioemotional support to their daughters than to their sons. We observe a negative age effect, which means that mothers give more support to their younger child than to their older child. This can be interpreted in terms of need: younger children may need more practical support because they are not yet fully settled (Rossi & Rossi, 1990). Alternatively, it can point to a tendency of mothers to favor the youngest child in the family (McHale et al., 1995).

Finally, we see strong negative effects of geographic distance on support. Mothers give more support to the child who lives closest. The other effects do not change when geographic distance is added (compare Model 1 and 2), with the exception of the effect of education, which is reduced by almost 30% after the inclusion of geographic distance. Because higher educated children tend to live further away from their parents, the reduction in the educational effect is plausible. This finding is comparable to previous studies of intergenerational contact which used comparisons between families (Kalmijn, 2006; Lawton, Silverstein, & Bengtson, 1994).

We now turn to the instrumental variables model, which is estimated with two-stage least squares and presented in Table 4. Because there is no substantive difference between

the first and the second child, we constrained the two sets of estimates (for child 1 and 2) to be identical. The effects of the child variables are broadly similar to the effects observed in the fixed effects model. Two exceptions are present. The effect of being disabled and the effect of schooling are no longer significant. This result probably has to do with the fact that the two-stage least squares model does not compare within families. Several maternal characteristics affect support. Children receive less support in large families. This finding may be interpreted in terms of resource depletion (Downey, 1995). Older mothers give less support than younger mothers and mothers who have a more familialistic orientation are more likely to give support.

The main goal of the two-stage least squares model is to test reciprocal effects. We see that the support a child receives is not affected by the support the sibling receives (Model 1). This is in contrast to the equality hypothesis, which assumes a positive effect. When we look at the practical support that the mother gives, there also is no significant *negative* effect (Model 2). Hence, when we focus on the most time-consuming aspects of support, we do not see evidence for competition. We also tested reciprocal effects between different dimensions of support (Models 4 and 5). We see that the practical support a child receives is positively affected by the socioemotional support that was given to the sibling (Model 4). Similarly, the socioemotional support a child receives is positively affected by the practical support that was given to the sibling (Model 5). In other words, there is some evidence for equalizing support across support dimensions, in line with the equality hypothesis. The magnitude of these effects—which are comparable to standardized regression coefficients—is small, however.

Conclusion and Discussion

Using a within-family approach, this study provides new support for several theoretical perspectives on intergenerational relationships. First, we found considerable support for the role of need. Parents give more support to the child who needs more support. This evidence was most clear for demographic indicators such as living alone and having children. Having children not only increases support via the child care that the mother provides, but also via other forms of support. Positive evidence was obtained as well for health indicators of need. A disability was associated with greater support and for most children, there was a positive effect of depressive symptoms on support received. At high levels of depression, support began to decrease again. We speculate that children who are highly depressed may resist help or withdraw from their social network, leading to less support. Of the socioeconomic need indicators, education had the expected effect but occupational status and employment did not. Perhaps if we had income data for the child and detailed measures of inter-vivos transfers, the evidence here would have been stronger. That there is an educational effect on nonfinancial forms of support is nevertheless quite interesting. It suggests that parents

are more concerned with their children if these have been less successful in terms of socioeconomic achievement. Our evidence here is partly at odds with the research of Fingerman and coworkers (2009) who find that parents give more support to children who are more successful. This discrepancy may be due to the different methods used. Fingerman and coworkers used random effects regression (multilevel models) rather than fixed effects regression so that their effects do not exclusively apply to within-family differences. Different measures may play a role as well. Fingerman and coworkers asked parents directly how successful their children were (in terms of their work and career), we use a narrower but also more objective outcome. Perhaps the measure of Fingerman and coworkers includes evaluative aspects of the relationship (e.g., affection) which also affect support, whereas our measure does not. Note that our finding is similar to the evidence that Fingerman and coworkers found for another measure, that is, the number of problems the child faced.

Our study also provides novel support for the notions of exchange and reciprocity. Mothers give more support to the child who has stronger filial norms, in line with the exchange hypothesis. In contrast to earlier studies, which have demonstrated correlations between current streams of support, this evidence points to the intertemporal nature of support. This evidence complements recent longitudinal studies of support (Silverstein et al., 2002) which showed that children reciprocate support received from parents earlier in life. Our study suggests that parents are motivated by exchange: they give support with the expectation of receiving something in return. Moreover, we suggest that parents also initiate exchange later in their life, and not only when the children are young and living at home. A caveat is that the effect of children's norms on support received from the mother, even though estimated in a within-family perspective, can partly be biased by reverse causation. Although it is not immediately plausible that adult children change their norms in response to parental behavior, panel data are still needed to establish the causal order more convincingly. Using individual children as units of analyses, and utilizing both waves of the NKPS (which were on average 3.5 years apart), I found no significant correlation between changes in children's filial norms and changes in support received from the mother ($r = .07$, $n = 623$). This suggests that possible reverse causality bias is probably modest at best.

We find some evidence for the notion of equality. Common sense suggests that parents do not want to treat their children differently, even when they feel closer to one child than to another. As a result, they would be inclined to equalize support across children. An alternative view is that parents are faced with time constraints which make it difficult to give all children the same amount of support. Using instrumental variable models for reciprocal effects, we do not find a positive effect of the support that is given to one child on the support that is given to the other child. There is some evidence, however, that mothers equalize

across different support dimensions: If giving more support to one child, they give more support to the other child but of a different kind. Negative effects are not found; so, the competition hypothesis is rejected. It would be interesting here to add a longitudinal component to study the equality principle. For example, parents could try to equalize support among children in the long run. If they do, this would not yield significant effects at one point in time (the last 3 months of the survey), but could yield significant effects over time. Unfortunately, panel data for pairs of siblings are relatively scarce. The data that I use do have a second wave but the number of pairs of siblings would be reduced too strongly for the present purposes.

An important question that arises from this analysis is why there is support for altruistic and exchange perspectives at the same time? This issue was also noted by Suitor and coworkers. We believe there are three possible interpretations. First, we can interpret this finding in terms of ambiguity. Suitor and coworkers (2006) argue that parents may be motivated by different and sometimes competing principles when they think about what to do for their children. The idea is that parents adhere to these principles simultaneously, something that can also cause tension in certain situations. Second, it is possible that some parents use an exchange perspective, whereas other parents use a more altruistic perspective. This too would lead to significant effects for both types of variables. To explore this, we examined interaction effects of need and norms with maternal characteristics, but very few of these turned out to be significant. Of course, it is still possible that other characteristics of parents will interact, for instance, personality traits like agreeableness, neuroticism, or extraversion. Third, it is possible that the circumstances of parents and/or their relationships will determine which principle is used. For example, under conditions of scarcity, parents may become more exchange oriented. Similarly, different stages of the life course may change the principle parents use. We think this last perspective is promising but also in need of further theoretical development before we can examine this issue empirically.

CORRESPONDENCE

Correspondence should be addressed to Matthijs Kalmijn, Department of Sociology and Anthropology, Oudezijds Achterburgwal 185, 1012 DK Amsterdam, Netherlands. E-mail: m.kalmijn@uva.nl.

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