The Gerontologist
cite as: *Gerontologist*, 2018, Vol. 58, No. 5, 872–882
doi:10.1093/geront/gnx144
Advance Access publication September 23, 2017

Research Article

Aging Parents' Disabilities and Daily Support Exchanges With Middle-Aged Children

Meng Huo, MA,[1,*] Jamie L. Graham, MA,[1] Kyungmin Kim, PhD,[2] Steven H. Zarit, PhD,[3] and Karen L. Fingerman, PhD[1]

[1]Department of Human Development and Family Sciences, The University of Texas at Austin. [2]Department of Gerontology, University of Massachusetts Boston. [3]Department of Human Development and Family Studies, The Pennsylvania State University.

*Address correspondence to: Meng Huo, MA, Department of Human Development and Family Sciences, The University of Texas at Austin, 108 E Dean Keeton Street, Stop A2702, Austin, TX 78712–1248. E-mail: mhuo@austin.utexas.edu

Received: April 27, 2017; Editorial Decision Date: August 3, 2017

Decision Editor: Rachel Pruchno, PhD

Abstract

Background and Objectives: Aging parents often incur disabilities in activities of daily living, which may limit their ability to give support and necessitate increased support from middle-aged children. Research has predominantly assessed disabled parents' retrospective reports of receiving support, but we know little about their daily support exchanges with middle-aged children. This study examined practical support, emotional support, and advice that aging parents with and without disabilities provided and received from middle-aged children, and links between these support exchanges and parents' daily mood.
Research Design and Methods: Aging parents (N = 202, M_{age} = 79.86) from the *Family Exchanges Study* II indicated their disabilities and background characteristics. They also reported daily exchanges of practical, emotional support, and advice with each middle-aged child and their daily mood for 7 days.
Results: Multilevel models revealed that aging parents suffering disabilities were equally likely to provide each type of support but more likely to receive practical support. Aging parents' disabilities seemed to buffer the effects of these support exchanges, such that parents with disabilities versus parents without disabilities reported less negative mood when providing practical support or emotional support, and more positive mood when receiving practical support.
Discussion and Implications: Exploring the role of aging parents' disabilities in their daily support exchanges with middle-aged children expands on the literature of late-life disabilities and parent-child ties. Despite increasing disabilities, aging parents continue to engage in support exchanges with middle-aged children in daily life and these parents appear to benefit from such involvement.

Keywords: Aging parents, Disability, Support exchanges, Daily mood

Exchanging support with middle-aged children is a common aspect of aging parents' lives and is critical to these parents' well-being (Djundeva, Mills, Wittek, & Steverink, 2015; Silverstein & Giarrusso, 2010). Yet with age, parents experience increasing disabilities in activities of daily living (e.g., daily personal care or transportation), which may deter their ability to give support and necessitate increased support from middle-aged children (Bangerter et al., 2017; Chatterji, Byles, Cutler, Seeman, & Verdes, 2015; Kim et al., 2017). Prior research has primarily examined disabled aging parents' retrospective reports of receiving intensive caregiving and we know little about the support that these parents may provide and receive from middle-aged children on a daily basis. Parents with disabilities may continue to offer words of encouragement to their middle-aged children or assist with small mundane tasks such as emptying the dishwasher.

This study focused on a broad older adult sample (rather than a caregiving sample) and assessed daily support among disabled aging parents, regardless of whether their middle-aged children defined themselves as caregivers. We considered different types of support that aging parents older than 65 may exchange with middle-aged children, including practical support, emotional support, and advice. Parents also transfer money to children; however, they typically do so infrequently rather than on a daily basis (Fingerman, Kim, Tennant, Birditt, & Zarit, 2016; Johnson, 2013).

We also asked whether and in what ways aging parents' disabilities influenced the implications of their support exchanges with middle-aged children. Daily support exchanges with middle-aged children have immediate consequences for aging parents' daily mood (Bangerter et al., 2017; Charles et al., 2016; Huo, Graham, Kim, Birditt, & Fingerman, 2017). Moreover, disabled parents may find providing support demanding and receiving support satisfying when such support responds to their disabilities. This study allowed us to compare the daily experiences of parents with disabilities to the experiences of parents without disabilities. The aim of this study is to advance understanding of late-life disability and parent–child ties and to provide insights into practice and policy that highlight disabled parents' potential contributions to grown children and family.

Aging Parents' Disabilities and Types of Support Exchanges

Aging parents' disabilities may be associated with parent–child daily support exchanges. Here, we directly compared the types of support (i.e., practical, emotional, advice) that aging parents with disabilities versus parents without disabilities provided and received from middle-aged children.

Support Parents Provide

Aging parents' disabilities may limit their capacity to support middle-aged children, but it is unclear whether this applies to all types of support. Disabilities may particularly hinder aging parents from providing practical support. Research suggests that parents offer less practical support as they age, possibly as a result of increasing disabilities in late life (Albertini, Kohli, & Vogel, 2007; van Tilburg, 1998). To our knowledge, however, only one study, conducted in the Netherlands, explicitly revealed that disabled older adults provided less practical support to social partners, regardless of these partners' age (van Tilburg & van Groenou, 2002). Here, we asked whether this effect held for parent–child ties on a daily basis.

By contrast, aging parents may continue to help middle-aged children by providing emotional support or advice, despite their own disabilities. Qualitative research has shown that older adults with disabilities still view themselves as helpful (Ingersoll-Dayton & Talbott, 1992). Aging parents with vision loss also consider providing emotional support a feasible way to invest in children's lives (Boerner & Reinhardt, 2003). Further, aging parents with disabilities may give more emotional support or advice to make up for decreases in practical support that they provide.

Support Parents Receive

With regard to the support that aging parents with disabilities receive, research has primarily focused on practical support, whereas research barely addresses other types of support (Kim et al., 2017; Wolff & Kasper, 2006). Aging parents with disabilities receive more practical support and care than their counterparts who do not have such disabilities (Bangerter et al., 2017; Kim et al., 2017; Wolff & Kasper, 2006). Yet, these disabled parents may also receive emotional support or advice (Kim et al., 2017). Moreover, disabilities often co-occur with depression in late life (Fauth, Gerstorf, Ram, & Malmberg, 2012) and aging parents with disabilities may receive more emotional comfort and companionship than parents without disabilities. Daily reports are well-suited to assess these two types of support and the current study may further refine our understanding of the support that disabled parents receive from middle-aged children.

Aging Parents' Disabilities and Implications for Daily Mood

Parent–child support exchanges have implications for aging parents' well-being. Providing support to middle-aged children is often emotionally rewarding for aging parents, whereas receiving support is often associated with poorer well-being (An & Cooney, 2006; Inagaki & Orehek, 2017; Thomas, 2010). Nevertheless, these associations may vary by the parents' disabilities (Bangerter, Kim, Zarit, Birditt, & Fingerman, 2015; Djundeva et al., 2015). We drew on the contingent exchange perspective (Davey & Eggebeen, 1998) to examine whether and how aging parents' disabilities moderated the associations between their daily support exchanges with middle-aged children and their own daily mood. This perspective suggests that the consequences of support exchanges are contingent on needs. That is, aging parents may suffer from providing support and benefit from receiving support from middle-aged children when these parents incur disabilities.

Support Parents Provide

We asked whether the influence of aging parents' disabilities on the associations between support provision and parents' daily mood differed by the type of support (i.e., practical, emotional, advice). Indeed, disabilities will likely make providing practical support especially difficult and demanding (Boerner & Reinhardt, 2003). Even assisting with a small task like taking out the trash may require extra effort for parents with disabilities than parents without. Yet, perhaps parents with disabilities are still able to engage in offering

support that is more feasible, such as emotional support and advice. Offering such support may enhance these parents' self-esteem (Krause & Shaw, 2000) and feelings of usefulness (Gruenewald, Karlamangla, Greendale, Singer, & Seeman, 2007), which benefits their daily mood (Kim & Thomas, 2017). Also, aging parents pursue to achieve generativity by guiding younger generations (An & Cooney, 2006; Erikson, 1950). Although parents without disabilities may engage in other activities to experience generativity (e.g., volunteering or church activities), disabled parents may be more limited in extra-familial activities and helping middle-aged children in a viable way may be their only source of experiencing generativity.

Support Parents Receive

We also examined whether the type of support that aging parents received explained the influence of these parents' disabilities on daily mood. Disabilities disrupt aging parents' daily functioning, which may render receiving practical support acceptable and helpful for these parents. Indeed, prior research has suggested that aging parents' disabilities may buffer the negative association between receiving practical support and these parents' well-being (Davey & Eggebeen, 1998; Djundeva et al., 2015; Gur-Yaish, Zisberg, Sinoff, & Shadmi, 2013). The buffering effect of disabilities may also apply to receiving emotional support from middle-aged children. Older adults with low functioning status have been shown to benefit from receiving emotional support, possibly because such support serves as a comfort for these older adults (Gur-Yaish et al., 2013; King et al., 2012). By contrast, aging parents' disabilities may exacerbate the link between receiving advice and these parents' well-being given violation of these parents' sense of control (King et al., 2012).

Other Factors Associated with Aging Parents' Support and Well-Being

This study also controlled for other factors that influence aging parents' daily support exchanges with middle-aged children and their daily mood to avoid spurious associations. We considered parents' demographic characteristics, including age, health, gender, education, marital status, and minority status. Older parents are more likely to experience health problems and difficulties with daily activities of living (Chatterji et al., 2015). Mothers are more invested in children than fathers and gender may influence the types of support that parents prefer to provide (Kahn, McGill, & Bianchi, 2011). Regarding education and marital status, better-educated or married parents provide more support to their children, whereas unmarried parents require more support from children (Fingerman et al., 2015; Isherwood, Luszcz, & King, 2016). Further, African American parents may be more involved with their children and exhibit greater reactivity toward daily events with them than European American parents (Cichy, Stawski, & Almeida, 2012).

We also considered family size and parents' coresidence with each child. Parents from larger families often provide less support to each child (Fingerman et al., 2015; Grundy & Henretta, 2006). Parents may provide support to multiple children and this is explored in post hoc tests. Lastly, living together is a form of support and provides parents opportunities to exchange support with children (Fingerman, Huo, Kim, & Birditt, 2016; Smits, van Gaalen, & Mulder, 2010).

The Current Study

The current study tested the following hypotheses.

Ho 1: We expected aging parents' disabilities to be associated with their daily support exchanges with middle-aged children.

- Ho 1a: Regarding provision of support, we expected that parents with disabilities versus parents without disabilities would be (a) less likely to provide practical support to middle-aged children and (b) equally or more likely to provide advice and emotional support to middle-aged children.
- Ho 1b: Regarding receipt of support, we expected that parents with disabilities versus parents without disabilities would be (a) more likely to receive practical support and (b) equally or more likely to receive daily emotional support or advice.

Ho 2: We expected aging parents' disabilities to moderate links between parents' daily support exchanges with middle-aged children and parents' daily mood; this moderating effect may vary by the type of support.

- Ho 2a: We expected aging parents with disabilities versus parents without disabilities to experience (a) decreased mood when providing practical support and (b) increased mood when providing emotional support or advice to middle-aged children.
- Ho 2b: We expected aging parents with disabilities versus parents without disabilities to experience (a) increased mood when receiving practical or emotional support and (b) decreased mood when receiving advice from middle-aged children.

Design and Methods

Sample and Procedures

The sample included 207 aging parents from the *Family Exchanges Study* Wave 2. The *Family Exchanges Study*

began in 2008 with 633 middle-aged adults (40–60 years old) from the Philadelphia Primary Metropolitan Statistical Area (Fingerman, Miller, Birditt, & Zarit, 2009). These middle-aged adults were screened to have at least one living parent and one adult child aged 18 and over. In the initial wave of data collection, we contacted 455 aging parents and recruited 337 of them (74%). Statistical analyses revealed that compared to the aging parents who refused to participate, these 337 aging parents were younger, healthier, less likely to be disabled and more likely to be female.

A majority of aging parents from Wave 1 (N = 211) participated in Wave 2 of *Family Exchanges Study* in 2013. The other 126 aging parents dropped because they were deceased (n = 58), too ill to participate (n = 5), or could not be reached (n = 63). We also recruited 30 aging parents who had not previously participated in Wave 1 and obtained a total sample of 241 aging parents in Wave 2. The returning aging parents and newly added parents did not differ in age, gender, education, and other background characteristics.

The current study relied on Wave 2 data because we started measuring daily experiences in this Wave. We invited participants who finished a 1-hour Computer-Assisted Telephone Interview (CATI; *main survey*) to report 7-day social experiences via brief telephone interviews each day (i.e., *daily surveys*). Of the 241 aging parents in Wave 2, 207 (86%) ended up participating in the daily surveys. These parents showed no difference in background characteristics when compared with the 34 parents who declined to participate in daily surveys. Parents received $7 for each day and one bonus dollar if they completed all 7 days (total $50). Most parents (80%) completed daily surveys for 7 days (1,375 days, 6.6 days per participant).

The final analytic sample included 202 aging parents because two parents did not provide complete data for analysis and three parents did not have contact with any child during the study week. These 202 aging parents in this study were nested within 179 families (because 46 parents were married to one another) and they reported on daily support exchanges with each middle-aged child (n = 795) on 1,340 days. Table 1 presents background characteristics of these parents.

Main Survey Measures

Parent Disability

Parents indicated whether they required assistance with four activities of daily living, including personal care, housework, transportation, and finances (Bassett & Folstein, 1991; Fingerman et al., 2011). Because the distribution was skewed, we coded 1 = *having a disability* if parents answered "yes" to at least one item and 0 = *no disability* if they answered "no" to all items.

Covariates

Parents reported their age, gender (1 = *male*, 0 = *female*), years of education, health (1 = *poor* to 5 = *excellent*), marital status (1 = *married/remarried*, 0 = *not married*), minority status (1 = *racial minority*, 0 = *non-minority*), and number of adult children. Parents indicated whether they coresided with each child (1 = *coresiding*, 0 = *not coresiding*).

Daily Surveys Measures

Support Exchanges

Aging parents indicated whether they provided and received (a) practical support (e.g., fixing something around the house, running an errand, or offering a ride), (b) emotional support (e.g., listening to concerns or providing comfort when children were upset), and (c) advice (e.g., helping with decision making or giving suggestions about things children could do) to each child each day (1 = *yes*, 0 = *no*).

Table 1. Characteristics of Aging Parents and Their Middle-Aged Children

	Parents with disabilities (n = 66)			Parents without disabilities (n = 136)			
Characteristic	*M*	*SD*	Range	*M*	*SD*	Range	*t* or χ^2
Age	82.92	5.72	66–95	78.38	5.46	63–91	5.38***
Years of education	12.82	2.13	7–17	13.04	2.22	8–17	–0.69
Physical health[a]	2.65	1.00	1–4	3.18	1.07	1–5	–3.42**
Number of adult children	3.70	1.73	2–10	4.09	2.35	1–15	–1.20
		Proportion			Proportion		
Male		.21			.35		3.76
Minority[b]		.41			.30		2.54
Married/remarried[c]		.29			.41		2.92
Coresiding with any child[d]		.20			.20		0.13

Note: Parent n = 202. Parents indicated whether they required assistance with four activities of daily living: personal care, housework, transportation, and finances. We coded 1 = *having a disability* and 0 = *no disability*. *M* = mean; *SD* = standard deviation.

[a]1 = *poor*, 2 = *fair*, 3 = *good*, 4 = *very good*, and 5 = *excellent*. [b]1 = *minority* and 0 = *non-minority*. [c]1 = *married or remarried* and 0 = *not married*. [d]1 = *coresiding* and 0 = *not coresiding*.

**p < .01. ***p < .001.

We treated provision or receipt of each type of support (2 exchanges × 3 types of support; 6 total) as separate variables in analyses.

Daily Mood

Each day parents rated the extent to which they experienced six positive emotions (e.g., happy, determined, calm) and nine negative emotions (e.g., lonely, nervous, distressed) on a scale from 1 (*none of the day*) to 5 (*all of the day*; Birditt, 2014; Piazza, Charles, Stawski, & Almeida, 2013). Mean scores were computed for daily positive mood (α = .69) and daily negative mood (α = .84).

Analytic Strategy

First, we tested how aging parents' disabilities were associated with their support exchanges with middle-aged children. We estimated multilevel models to take into account the 4-level structure of our data: 46 parents (*level 3*) were nested in couples (*level 4*) and parents reported for 7 days (*level 2*) on their support exchanges with each adult child (*level 1*). Because the current sample only included 23 couples, we calculated the intraclass correlation (ICC) to assess the relative proportion of the couple-level variance among the total variance explained by the model. The couple-level exhibited no variance (ICC = .00), which indicated that the 46 aging parents in couples could be treated as independent in analyses (Peugh, 2010). Thus, we dropped this level and used 3-level models instead. We entered the dichotomized variable indicating whether the parent had any disability (1 = *having a disability*, 0 = *not having disabilities*) as the main predictor. We assessed whether aging parents provided or received practical, emotional support, or advice from each adult child each day (1 = *yes*, 0 = *no*) and treated each type of exchange as the outcome in separate models. To transform the binary outcomes into the probability of exchanging support, we used logistic regression models with SAS PROC GLIMMIX to test the hypotheses (Guo & Zhao, 2000). The 3-level logistic regression models controlled for parent age, parent gender, parent education, parent health, parent marital status, parent minority status, number of adult children, child gender, and parent coresidence status with each child.

To test how aging parents' disabilities moderated links between exchanging different types of support with middle-aged children and parents' daily mood, we estimated 2-level models dropping the couple level (ICC = .00; Peugh, 2010). That is, the day level (*level 1*) was nested in the parent level (*level 2*). Predictors were whether aging parents provided or received practical support, emotional support, and advice to *any child* each day (1 = *yes*, 0 = *no*). We generated interaction terms with aging parents' support exchanges by their disability status. We ran linear multilevel models (SAS PROC MIXED) treating parents' positive and negative mood each day as two separate outcomes (2 moods × 6 types of support exchanges; 12 models total). The models examining daily mood controlled for parent age, parent gender, parent education, parent health, parent marital status, number of adult children, as well as parent coresidence status with any child. Significant interactions were further explored with simple slope analyses that examined the links between support exchanges and mood by the moderator (i.e., parents with disabilities vs parents without disabilities).

Results

Table 1 describes background information for aging parents with and without disabilities. Compared to the 136 aging parents without disabilities (67%), the 66 parents with disabilities (33%) were older, but did not differ on other background characteristics.

We next examined the likelihood that parents in each group exchanged practical support, emotional support and advice with their middle-aged children (see Table 2). Most aging parents exchanged support with children frequently, on average 3 to 4 days during the study week. The most frequent type of support aging parents received or provided was emotional support, followed by advice and then practical help. Half of the parents with disabilities still provided practical support to their middle-aged children. Statistical analyses including *t* tests and chi-square tests revealed that aging parents with disabilities, compared to parents without disabilities, were more likely to receive practical support on a given day during the study week. Parents with disabilities also received practical support for more days.

Aging Parents' Disability and Different Types of Support Exchanges

We examined associations between aging parents' disabilities and support exchanges with 3-level logistic models. As expected, aging parents with disabilities were almost twice as likely as parents without disabilities to receive practical support (odds ratio [*OR*] = 1.81, p = .009; see Table 3) but equally likely to receive emotional support (*OR* = 1.09, p = .72) or advice (*OR* = 1.24, p = .34; findings not shown in tables) from middle-aged children. Regarding provision of support, aging parents did not differ by disability status in the likelihood of providing practical support (*OR* = 1.55, p = .09), emotional support (*OR* = 1.09, p = .68), or advice (*OR* = 1.15, p = .57; findings not shown in tables).

Aging Parents' Disability and Implications for Daily Mood

Turning to daily mood, we estimated linear multilevel models for moderation analyses (see Table 4). Findings revealed two significant interaction effects of aging parents' disabilities and providing practical support (B = −0.10, p = .02) and emotional support (B = −0.10, p = .006) on parents' daily negative mood. For practical support, aging parents

Table 2. Proportion of Parents Reporting Daily Support Exchanges With Offspring during the Study Week

	Proportions of parents exchanging support with middle-aged children			Proportions of days parents exchanged support with middle-aged children		
	Parents with disabilities (n = 66)	Parents without disabilities (n = 136)	χ^2	Parents with disabilities (n = 66)	Parents without disabilities (n = 136)	t
Support provided to child	.85	.90	1.00	.46	.45	0.26
Practical support	.65	.51	3.74	.22	.18	1.14
Emotional support	.77	.77	0.00	.36	.33	0.69
Advice	.70	.69	0.01	.25	.27	−0.50
Support received from child	.91	.89	0.18	.56	.49	1.42
Practical support	.73	.58	4.08*	.31	.22	2.04*
Emotional support	.80	.74	1.10	.41	.33	1.61
Advice	.73	.72	0.10	.34	.29	1.19

Note: Parent n = 202, day n = 1,340.
*p < .05.

Table 3. Multilevel Logistic Models Predicting Parents' Daily Practical Support Received From Middle-Aged Children From Parents' Disabilities

Variable	*B*	*SE*	*OR*
Fixed effects			
Intercept	−0.06	1.59	
Aging parents' disability[a]	0.59**	0.23	1.81
Covariates			
Parent age	−0.03	0.02	0.97
Parent gender[b]	−0.01	0.24	0.99
Parent education	0.02	0.04	1.02
Parent physical health[c]	−0.00	0.09	1.00
Parent marital status[d]	−0.16	0.23	0.86
Parent minority[e]	0.42	0.22	1.52
Number of children	−0.17***	0.05	0.85
Offspring gender[b]	−0.51***	0.13	0.60
Coresidence[f]	1.98***	0.19	7.25
Random effects			
Intercept VAR (Level 2: day)	0.00	—	
Intercept VAR (Level 3: parent)	0.96***	0.17	
−2 (pseudo) log likelihood	30,452.9		

Note: Parent n = 202; Day n = 1,340. Daily support outcomes were coded 1 = *received* and 0 = *did not received from that child on that day*. OR = odds ratio; *SE* = standard error; VAR = variance.
[a]1 = *having a disability* and 0 = *no disability*. [b]1 = *male* and 0 = *female*. [c]1 = *poor*, 2 = *fair*, 3 = *good*, 4 = *very good*, and 5 = *excellent*. [d]1 = *married or remarried* and 0 = *not married*. [e]1 = *racial minority* and 0 = *non-minority*. [f]1 = *coresiding with that child* and 0 = *not coresiding*.
**p < .01. ***p < .001.

with disabilities reported less negative mood when providing practical support to middle-aged children (B = −0.09, p = .02), whereas the association was not significant in parents without disabilities (B = 0.02, p = .50; see Figure 1a). For emotional support, aging parents without disabilities reported more negative mood when providing emotional support to middle-aged children (B = 0.05, p = .01; see Figure 1b). The association for parents with disabilities was not significant (B = −0.06, p = .12).

We also found a significant interaction effect involving receiving practical support and parents' positive mood (B = 0.17, p = .01). Simple slope analyses revealed that aging parents with disabilities reported significantly more positive mood when receiving practical support from middle-aged children (B = 0.15, p = .005; see Figure 1c). Yet, there was no association between receiving support and mood in parents without disabilities (B = −0.01, p = .77).

Post-Hoc Tests

We also considered the number of middle-aged children exchanging support with aging parents on a daily basis and asked whether exchanging support with multiple children influenced parents' mood. We generated continuous variables to indicate how many middle-aged children provided or received daily practical support, emotional support, and advice and treated these variables as predictors. We estimated linear multilevel models with daily positive and negative mood as the outcomes. Findings showed similar patterns as the main results (see Supplementary Table 1).

Discussion

Prior research has mainly assessed the practical support or care that aging parents with disabilities receive in retrospective reports; however, there has been limited attention to these parents' daily exchanges of various types of support with middle-aged children. Disabled parents may still be able to provide certain types of support to their middle-aged children, such as listening to these children's complaints about mundane matters. Further, on a daily basis, these parents also receive support other than the practical

Table 4. Multilevel Models Predicting Parents' Daily Mood From Support Provision and Receipt: Parents' Disabilities as a Moderator

	Negative mood by providing practical support		Negative mood by providing emotional support		Positive mood by receiving practical support	
Variable	*B*	*SE*	*B*	*SE*	*B*	*SE*
Fixed effects						
Intercept	1.60***	0.33	1.60***	0.33	3.62***	0.61
Parent disability[a]	0.11*	0.05	0.13*	0.05	−0.07	0.09
Providing practical support	0.01	0.03	—	—	—	—
Providing practical support × disability[a]	−0.10*	0.04	—	—	—	—
Providing emotional support	—	—	0.04*	0.02	—	—
Providing emotional support × disability[a]	—	—	−0.10**	0.04	—	—
Receiving practical support	—	—	—	—	−0.01	0.04
Receiving practical support × disability[a]	—	—	—	—	0.17*	0.07
Covariates						
Parent age	−0.00	0.00	−0.00	0.00	−0.01	0.01
Parent gender[b]	−0.06	0.05	−0.06	0.05	0.02	0.09
Parent education	−0.00	0.01	−0.00	0.01	0.03	0.02
Parent physical health[c]	−0.07***	0.02	−0.07***	0.02	0.09**	0.04
Parent marital status[d]	−0.06	0.05	−0.06	0.05	−0.10	0.08
Parent minority status[e]	−0.12*	0.05	−0.12*	0.05	0.23**	0.09
Number of children	0.01	0.01	0.01	0.01	−0.00	0.02
Coresidence[f]	0.01	0.05	0.01	0.05	−0.13	0.10
Random effects						
Intercept VAR	0.07***	0.01	0.07***	0.01	0.23***	0.03
Residual VAR	0.06***	0.00	0.06***	0.00	0.15***	0.01
−2 log likelihood	428.8		428.8		1,792.4	

Note: Parent n = 202; Day n = 1,340. Daily positive mood was measured by averaging six items from 1 = *none of the day* to 5 = *all of the day*; daily negative mood was measured by averaging nine items from 1 = *none of the day* to 5 = *all of the day*. *SE* = standard error; VAR = variance.
[a]1 = *having a disability* and 0 = *no disability*. [b]1 = *male* and 0 = *female*. [c]1 = *poor*, 2 = *fair*, 3 = *good*, 4 = *very good*, and 5 = *excellent*. [d]1 = *married or remarried* and 0 = *not married*. [e]1 = *racial minority* and 0 = *non-minority*. [f]1 = *coresiding with any child* and 0 = *not coresiding*.
*p < .05. **p < .01. ***p < .001.

help documented in the literature (Kim et al., 2017). The current study expands on prior research by (a) comparing daily practical support, emotional support, and advice that aging parents with disabilities and parents without disabilities provide and receive from their middle-aged children and (b) exploring how exchanging different types of support under such circumstances contributes to parents' daily mood. Findings suggest that aging parents with disabilities remain involved with middle-aged children and emotionally benefit from such involvement.

Aging Parents' Disability and Different Types of Support Exchanges

Consistent with prior research (Djundeva et al., 2015; Kim et al., 2017), aging parents suffering disabilities were more likely to receive practical support from middle-aged children. This finding offers additional evidence that the common downward flow of support in Western cultures likely reverses in late life when aging parents experience declines (Fingerman & Birditt, 2010; Silverstein & Giarrusso, 2010). Interestingly, parents' disabilities did not hinder them from providing practical support, emotional support, or advice to middle-aged children. In fact, regardless of their disabilities, the majority of aging parents, provided support to their children at some point during the study week.

There are several possible reasons why disabilities do not impede aging parents' provision of daily support. Older adults value family ties that are emotionally meaningful (Charles & Carstensen, 2010) and may maintain such ties with continual support by giving emotional support or advice to middle-aged children. Regarding practical support, daily parent–child interactions may involve assistance with easy tasks that do not require great physical energy. For example, even aging parents with disabilities may still be able to sit and fold laundry. It is also possible that aging parents overestimate the practical support they give. Prior work has found that parents often report providing more support to children than children report receiving (Giarrusso, Feng, & Bengtson, 2005). The current study only relied on aging parents' reports and thus could not rule out this possibility. Future research that includes both

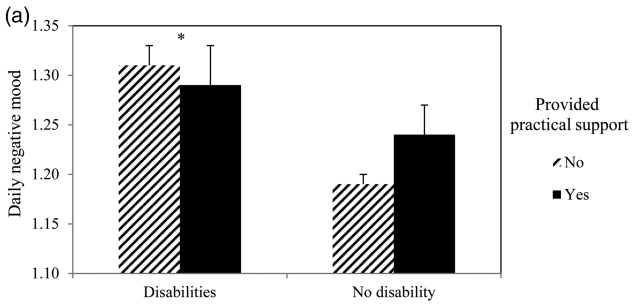

Figure 1a.

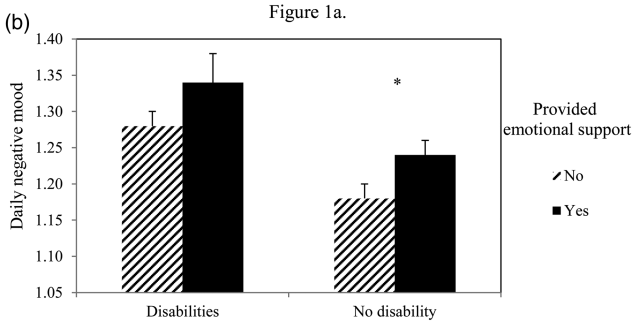

Figure 1b.

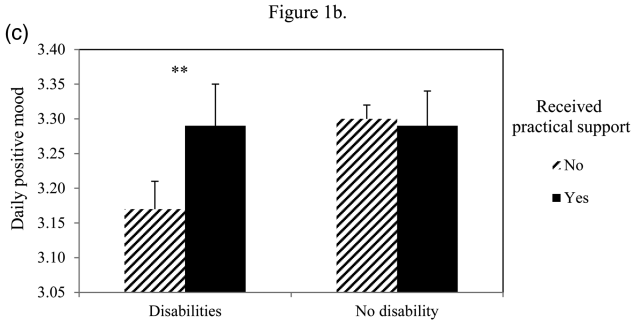

Figure 1c.

Figure 1. Interactions between aging parents' disabilities and exchanging daily support with middle-aged children predicting parents' daily mood. (a) Aging parents with disabilities (*vs.* parents without disabilities) reported less negative mood when providing practical support to middle-aged children. (b) Aging parents without disabilities (*vs.* parents with disabilities) reported more negative mood when providing emotional support to middle-aged children. (c) Aging parents with disabilities (*vs.* parents without disabilities) reported more positive mood when receiving practical support from middle-aged children. *$p < .05$. **$p < .01$.

parties' perspectives on support might clarify the nature of discrepancies in reports of support.

Aging Parents' Disability and Implications for Daily Mood

We explored whether aging parents' disabilities explained variation in the associations between parent–child daily support exchanges and parents' daily mood. Overall, findings suggest positive consequences for disabled parents' involvement with middle-aged children.

Interestingly, aging parents with disabilities reported less negative mood when providing practical support to middle-aged children, which seems to be consistent with the generativity perspective (An & Cooney, 2006; Erikson, 1950). Prior research suggests that midlife and aging parents experienced fewer depressive symptoms when their children relied on them for practical support (Byers, Levy, Allore, Bruce, & Kasl, 2008). For aging parents with disabilities, providing practical support, or when they think they do, may especially boost their feelings of usefulness and mood (Gruenewald et al., 2007; Kim & Thomas, 2017). Alternatively, because disabled parents often receive more practical support from middle-aged children (Kim et al., 2017), they may attempt to reciprocate the support that they receive to maintain feelings of equity (Gleason & Iida, 2015). This possibility should be interpreted with caution, however, because we did not test reciprocity in this daily context. Future longitudinal studies may explore this possibility of reciprocity. Finally, it may be that parents who report less negative mood are more motivated to provide practical help. Because the assessments were completed at the end of the day, we could not be certain that support diminished negative mood.

Also in line with the generativity perspective (An & Cooney, 2006; Erikson, 1950), aging parents' disabilities seem to buffer the association between providing emotional support and parents' mood. Indeed, aging parents with disabilities maintained their mood regardless of whether they provided emotional support. Nonetheless, parents without disabilities reported a more negative mood when providing such support. It may be that the nature of emotional support varies between parents with disabilities versus parents without disabilities. For example, offspring may vary their emotional disclosures depending on their parents' disability status. Middle-aged children may only talk about trivial stressors with their disabled parents for fear of burdening these parents (Infurna & Wiest, 2016). Yet, these children may still confide in parents without disabilities about severe life events or experiences that exacerbate these parents' negative mood. Indeed, studies have shown that even in late life, many parents continue to experience distress due to their middle-aged children's problems (Fingerman et al., 2012; Huo et al., 2017; Pillemer, Suitor, Riffin, & Gilligan, 2017).

Following the contingent exchange perspective (Davey & Eggebeen, 1998), aging parents with disabilities versus parents without disabilities reported enhanced mood when they received practical support from middle-aged children. Although receiving support may violate older adults' feelings of autonomy, such support is beneficial when needed (Davey & Eggebeen, 1998; Djundeva et al., 2015; Gur-Yaish et al., 2013). Practical support from middle-aged children may directly respond to these parents' reduced capacities required for daily living (e.g., errands, personal care) and improve their life quality. In addition, practical support requires in-person contact and aging parents with disabilities may appreciate their children's companionship while these children provide practical support. These disabled parents may also view their children's support as an expression of love and concern.

Limitations and Implications for Practice and Policy

Several limitations to the current study warrant comment. Given that the majority of respondents were mothers (70%), it was not possible to test thoroughly how aging mothers and fathers differentially exchange support with middle-aged children. Also, the current study did not include information regarding how long aging parents have been disabled and requiring extra help, which may influence their exchange patterns with middle-aged children.

The current study did not differentiate between various types of disabilities. Different disabilities (e.g., cognitive, physical) may differentially influence the support that parents receive and give to children (Vaughan & Giovanello, 2010). For example, some parents may have difficulties in daily personal care, which limits their ability to provide practical help, whereas parents with cognitive issues may not offer advice.

The main implication of this study is the importance of moving from viewing older adults with disabilities as solely recipients of support to recognizing that they may continue to provide tangible and emotional support to their families. Policies and interventions are often based on views of disabled older adults as needy and passive, but this study suggests that aging parents with disabilities still play an important role in family life as a resource for their children and grandchildren. Interventions that focus on disabled aging parents can build on these positive contributions as a way of enhancing how family members view the aging parents. Showing respect for these parents' desire to help may maximize these parents' sense of control and improve their life quality (Kim & Thomas, 2017). Furthermore, it may be that families sometimes discourage older adults from helping, believing that they should not have to make the effort or because children and grandchildren find the help given to be unnecessary or awkward, such as in the case of unwanted advice. Yet, encouraging older adults to give back to the family may have the beneficial effect of reducing the resistance that families often encounter when trying to help a parent or grandparent (e.g., Heid, Zarit, & Fingerman, 2016). Framing exchanges of support in positive ways may strengthen emotional bonds between parents and children, which is critical for these parents' well-being (Charles & Carstensen, 2010; King et al., 2012). More positive views of older people with disabilities may also help policy makers move beyond their catastrophic thinking about the public costs of an aging population and instead identify ways of balancing costs with the contributions that older adults may still be able to make (Furstenberg, Hartnett, Kohli, & Zissimopoulos, 2015).

Supplementary Material

Supplementary data are available at *The Gerontologist* online.

Funding

This study was supported by grants from the National Institute on Aging (NIA), R01AG027769, *Family Exchanges Study II* (Karen L. Fingerman, Principal investigator). The *MacArthur Network on an Aging Society* (John W. Rowe, Network director) provided funds. This research also was supported by grant, 5 R24 HD042849 awarded to the Population Research Center (PRC) at The University of Texas at Austin by the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD).

Conflict of Interest

The authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or nonfinancial interest (such as personal or professional relationships, affiliations, knowledge, or beliefs) in the subject matter or materials discussed in this manuscript.

References

Albertini, M., Kohli, M., & Vogel, C. (2007). Intergenerational transfers of time and money in European families: Common patterns-different regimes? *Journal of European Social Policy*, **17**, 319–334. doi:10.1177/0958928707081068

An, J. S., & Cooney, T. M. (2006). Psychological well-being in mid to late life: The role of generativity development and parent-child relationships across the lifespan. *International Journal of Behavioral Development*, **30**, 410–421. doi:10.1177/0165025406071489

Bangerter, L. R., Kim, K., Zarit, S. H., Birditt, K. S., & Fingerman, K. L. (2015). Perceptions of giving support and depressive symptoms in late life. *The Gerontologist*, **55**, 770–779. doi:10.1093/geront/gnt210

Bangerter, L. R., Liu, Y., Kim, K., Zarit, S. H., Birditt, K. S., & Fingerman, K. L. (2017). Everyday support to aging parents: Links to middle-aged children's diurnal cortisol and daily mood. *The Gerontologist*. Advance online publication. doi:10.1093/geront/gnw207

Bassett, S. S., & Folstein, M. F. (1991). Cognitive impairment and functional disability in the absence of psychiatric diagnosis. *Psychological Medicine*, **21**, 77–84. doi:10.1017/S0033291700014677

Birditt, K. S. (2014). Age differences in emotional reactions to daily negative social encounters. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, **69**, 557–566. doi:10.1093/geronb/gbt045

Boerner, K., & Reinhardt, J. P. (2003). Giving while in need: Support provided by disabled older adults. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, **58**, S297–S304. doi:10.1093/geronb/58.5.S297

Byers, A. L., Levy, B. R., Allore, H. G., Bruce, M. L., & Kasl, S. V. (2008). When parents matter to their adult children: Filial reliance associated with parents' depressive symptoms. *The Journals of Gerontology, Series B; Psychological Sciences*

and Social Sciences, **63**, P33–P40. doi:10.1093/geronb/63.1.P33

Charles, S. T., & Carstensen, L. L. (2010). Social and emotional aging. *Annual Review of Psychology*, **61**, 383–409. doi:10.1146/annurev.psych.093008.100448

Charles, S. T., Piazza, J. R., Mogle, J. A., Urban, E. J., Sliwinski, M. J., & Almeida, D. M. (2016). Age differences in emotional well-being vary by temporal recall. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, **71**, 798–807. doi:10.1093/geronb/gbv011

Chatterji, S., Byles, J., Cutler, D., Seeman, T., & Verdes, E. (2015). Health, functioning, and disability in older adults–present status and future implications. *Lancet*, **385**, 563–575. doi:10.1016/S0140-6736(14)61462-8

Cichy, K. E., Stawski, R. S., & Almeida, D. M. (2012). Racial differences in exposure and reactivity to daily family stressors. *Journal of Marriage and Family*, **74**, 572–586. doi:10.1111/j.1741-3737.2012.00971.x

Davey, A., & Eggebeen, D. J. (1998). Patterns of intergenerational exchange and mental health. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, **53**, P86–P95. doi:10.1093/geronb/53B.2.P86

Djundeva, M., Mills, M., Wittek, R., & Steverink, N. (2015). Receiving instrumental support in late parent-child relationships and parental depression. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, **70**, 981–994. doi:10.1093/geronb/gbu136

Erikson, E. K. (1950). Eight ages of man. In E. K. Erikson (Ed.), *Childhood and society* (pp. 247–273). New York, NY: W.W. Norton.

Fauth, E. B., Gerstorf, D., Ram, N., & Malmberg, B. (2012). Changes in depressive symptoms in the context of disablement processes: Role of demographic characteristics, cognitive function, health, and social support. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, **67**, 167–177. doi:10.1093/geronb/gbr078

Fingerman, K. L., & Birditt, K. S. (2010). Relationships between adults and their aging parents. In K. W. Schaie & S. L. Willis (Eds.), *Handbook of the psychology of aging* (pp. 219–232). Cambridge, MA: Academic Press.

Fingerman, K. L., Cheng, Y.-P., Birditt, K., & Zarit, S. (2012). Only as happy as the least happy child: Multiple grown children's problems and successes and middle-aged parents' well-being. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, **67**, 184–193. doi:10.1093/geronb/gbr086

Fingerman, K. L., Huo, M., Kim, K., & Birditt, K. S. (2016). Coresident and noncoresident emerging adults' daily experiences with parents. *Emerging Adulthood*. Advance online publication. doi:10.1177/2167696816676583

Fingerman, K. L., Kim, K., Tennant, P. S., Birditt, K. S., & Zarit, S. H. (2016). Intergenerational support in a daily context. *The Gerontologist*, **56**, 896–908. doi:10.1093/geront/gnv035

Fingerman, K. L., Kim, K., Davis, E. M., Furstenberg, F. F., Jr., Birditt, K. S., & Zarit, S. H. (2015). "I'll give you the world": Socioeconomic differences in parental support of adult children. *Journal of Marriage and Family*, **77**, 844–865. doi:10.1111/jomf.12204

Fingerman, K., Miller, L., Birditt, K., & Zarit, S. (2009). Giving to the good and the needy: Parental support of grown children. *Journal of Marriage and Family*, **71**, 1220–1233. doi:10.1111/j.1741-3737.2009.00665.x

Fingerman, K. L., Pitzer, L. M., Chan, W., Birditt, K., Franks, M. M., & Zarit, S. (2011). Who gets what and why? Help middle-aged adults provide to parents and grown children. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, **66**, 87–98. doi:10.1093/geronb/gbq009

Furstenberg, F. F., Jr., Hartnett, C. S., Kohli, M., & Zissimopoulos, J. M. (2015). The future of intergenerational relations in aging societies. *Daedalus*, **144**, 31–40. doi:10.1162/DAED_a_00328

Giarrusso, R., Feng, D., & Bengtson, V. L. (2005). The intergenerational stake phenomenon over 20 years. In M. Silverstein & K. W. Schaie (Eds.), *Annual review of gerontology and geriatrics* (pp. 55–76). New York, NY: Springer.

Gleason, M. E. J., & Iida, M. (2015). Social support. In M. Mikulincer, P. R. Shaver, J. A. Simpson, & J. F. Dovidio (Eds.), *APA handbook of personality and social psychology, Volume. 3: Interpersonal relations* (pp. 351–370). Washington, DC: American Psychological Association.

Gruenewald, T. L., Karlamangla, A. S., Greendale, G. A., Singer, B. H., & Seeman, T. E. (2007). Feelings of usefulness to others, disability, and mortality in older adults: The MacArthur Study of Successful Aging. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, **62**, P28–P37. doi:10.1093/geronb/62.1.P28

Grundy, E., & Henretta, J. C. (2006). Between elderly parents and adult children: A new look at the intergenerational care provided by the 'sandwich generation.' *Ageing and Society*, **26**, 707–722. doi:10.1017/S0144686X06004934

Guo, G., & Zhao, H. (2000). Multilevel modeling for binary data. *Annual Review of Sociology*, **26**, 441–462. doi:10.1146/annurev.soc.26.1.441

Gur-Yaish, N., Zisberg, A., Sinoff, G., & Shadmi, E. (2013). Effects of instrumental and psychological support on levels of depressive symptoms for hospitalized older adults. *Aging and Mental Health*, **17**, 646–653. doi:10.1080/13607863.2012.758234

Heid, A. R., Zarit, S. H., & Fingerman, K. L. (2016). "My parent is so stubborn!"-Perceptions of aging parents' persistence, insistence, and resistance. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, **71**, 602–612. doi:10.1093/geronb/gbu177

Huo, M., Graham, J. L., Kim, K., Birditt, K. S., & Fingerman, K. L. (2017). Aging parents' daily support exchanges with adult children suffering problems. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*. Advance online publication. doi:10.1093/geronb/gbx079

Inagaki, T. K., & Orehek, E. (2017). On the benefits of giving social support: When, why, and how support providers gain by caring for others. *Current Directions in Psychological Science*, **26**, 109–113. doi:10.1177/0963721416686212

Infurna, F. J., & Wiest, M. (2016). The effect of disability onset across the adult life span. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*. Advance online publication. doi:10.1093/geronb/gbw055

Ingersoll-Dayton, B., & Talbott, M. M. (1992). Assessments of social support exchanges: Cognitions of the old-old. *International*

Journal of Aging and Human Development, **35**, 125–143. doi:10.2190/AVFK-V1TQ-100V-VQFV

Isherwood, L. M., Luszcz, M. A., & King, D. S. (2016). Reciprocity in material and time support within parent–child relationships during late-life widowhood. *Ageing and Society*, **36**, 1668–1689. doi:10.1017/S0144686X15000537

Johnson, M. K. (2013). Parental financial assistance and young adults' relationships with parents and well-being. *Journal of Marriage and Family*, **75**, 713–733. doi:10.1111/jomf.12029

Kahn, J. R., McGill, B. S., & Bianchi, S. M. (2011). Help to family and friends: Are there gender ddifferences at older ages? *Journal of Marriage and Family*, **73**, 77–92. doi:10.1111/j.1741-3737.2010.00790.x

Kim, K., Bangerter, L. R., Liu, Y., Polenick, C. A., Zarit, S. H., & Fingerman, K. L. (2017). Middle-aged offspring's support to aging parents with emerging disability. *The Gerontologist*, **57**, 441–450. doi:10.1093/geront/gnv686

Kim, S., & Thomas, P. A. (2017). Direct and indirect pathways from social support to health?. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*. Advance online publication. doi:10.1093/geronb/gbx084

King, J., Yourman, L., Ahalt, C., Eng, C., Knight, S. J., Pérez-Stable, E. J., & Smith, A. K. (2012). Quality of life in late-life disability: "I don't feel bitter because I am in a wheelchair." *Journal of the American Geriatrics Society*, **60**, 569–576. doi:10.1111/j.1532-5415.2011.03844.x

Krause, N., & Shaw, B. A. (2000). Giving social support to others, socioeconomic status, and changes in self-esteem in late life. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, **55**, S323–S333. doi:10.1093/geronb/55.6.S323

Peugh, J. L. (2010). A practical guide to multilevel modeling. *Journal of School Psychology*, **48**, 85–112. doi:10.1016/j.jsp.2009.09.002

Piazza, J. R., Charles, S. T., Stawski, R. S., & Almeida, D. M. (2013). Age and the association between negative affective states and diurnal cortisol. *Psychology and Aging*, **28**, 47–56. doi:10.1037/a0029983

Pillemer, K., Suitor, J. J., Riffin, C., & Gilligan, M. (2017). Adult children's problems and mothers' well-being. *Research on Aging*, **39**, 375–395. doi:10.1177/0164027515611464

Silverstein, M., & Giarrusso, R. (2010). Aging and family life: A decade review. *Journal of Marriage and Family*, **72**, 1039–1058. doi:10.1111/j.1741-3737.2010.00749.x

Smits, A., van Gaalen, R. I., & Mulder, C. H. (2010). Parent-child coresidence: Who moves in with whom and for whose needs? *Journal of Marriage and Family*, **72**, 1022–1033. doi:10.1111/j.1741-3737.2010.00746.x

Thomas, P. A. (2010). Is it better to give or to receive? Social support and the well-being of older adults. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, **65**, S351–S357. doi:10.1093/geronb/gbp113

van Tilburg, T. (1998). Losing and gaining in old age: Changes in personal network size and social support in a four-year longitudinal study. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, **53**, S313–S323. doi:10.1093/geronb/53B.6.S313

van Tilburg, T., & van Groenou, M. B. (2002). Network and health changes among older Dutch adults. *Journal of Social Issues*, **58**, 697–713. doi:10.1111/1540–4560.00041

Vaughan, L., & Giovanello, K. (2010). Executive function in daily life: Age-related influences of executive processes on instrumental activities of daily living. *Psychology and Aging*, **25**, 343–355. doi:10.1037/a0017729

Wolff, J. L., & Kasper, J. D. (2006). Caregivers of frail elders: Updating a national profile. *The Gerontologist*, **46**, 344–356. doi:10.1093/geront/46.3.344