

Assisting Parents and In-Laws: Gender, Type of Assistance, and Couples' Employment

We use 1995 MIDUS data (n = 2,085) to assess whether the gender gap in help persists across different types of help (unpaid task assistance, emotional support, financial assistance) to parents and in-laws. We also examine whether joint employment patterns influence levels of help. Persistent gender differences are identified in levels of emotional support to parents and in-laws: Women spend more time than men giving this help. There are no gender differences in levels of unpaid task assistance or financial assistance to parents or in-laws. Individuals in single-earner couples, however, provide greater levels of unpaid task assistance to in-laws and financial assistance to parents than individuals in dual-earner couples. Furthermore, financial assistance to parents is positively linked to work hours.

Prior research has established that women generally spend more time helping their parents than men do (Cancian & Oliker, 2000; Chumbler, Pienta, & Dwyer, 2004; Gerstel & Gallagher, 1994; Laditka & Laditka, 2000; Sarkisian & Gerstel, 2004). We know much less about whether gender shapes other forms of parental

help, such as financial assistance. Although the source of the gender gap in time-based help to parents is not fully understood, a handful of studies suggest that differential employment and the characteristics of men's and women's jobs structure time-based help to relatives (Cancian & Oliker; Chumbler et al.; Gerstel & Gallagher, 1994; Laditka & Laditka, 2000; Sarkisian & Gerstel). Moreover, previous research indicates that the amount of financial support given to parents tends to be positively linked to household income and wage rates (Couch, Daly, & Wolf, 1999; Zissimopoulos, 2001), which suggests that employment plays a role in influencing other types of assistance as well.

Understanding the processes that shape different types of informal help is important because meeting the support needs of kin promotes independent living among older relatives (Antonucci, 1990), protects their physical and psychological health (Allen, Blieszner, & Roberto, 2000; Janevic et al., 2004), and enhances their levels of life satisfaction (Krause, 2004). A focus on supplemental financial help to older relatives is important, given declining pensions and government supports for older individuals. Furthermore, it is also generally established that women's caregiving time is linked to increased psychological strain and diminished physical health (Pavalko & Woodbury, 2000), underscoring concerns about negative health consequences that accrue to particular groups providing greater levels of relative support. Overall, documenting how employment structures the provision of time and money support to parents and other kin becomes increasingly

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Key Words: caregiving, dual-earner, paid work, social support, time use.

critical as the proportion of potential helpers who are employed rises.

Although much has been learned about the relationship among gender, employment, and help to relatives, there are three existing gaps in current knowledge. First, it is not clear whether there are gender differences in levels of both time and money help. Second, previous research has not clearly tested how gender and *joint* patterns of employment influence the provision of time and money help by workers, in spite of evidence that indicates that the amount of help provided is a function of household, not individual, resources (Boaz, Hu, & Ye, 1999). Finally, the vast majority of previous studies focus on help to parents (E. Lee, Spitze, & Logan, 2003). Thus, it is not clear whether the same processes that govern adult children's provision of help to parents also underlie help to other relatives.

This study extends previous research by providing information that addresses each of these gaps. We utilize nationally representative data from the 1995 Midlife in the United States Study (MIDUS) to address two questions. First, do gender gaps persist across different forms of time-based help (unpaid task assistance and emotional support) as well as financial assistance to both parents and in-laws? Second, how are time and money commitments to parents and in-laws affected by the employment context (employment status, work hours) of *both* couple members among married or cohabiting individuals?

Gender Gaps and Assistance

Time-based assistance to parents and in-laws. Previous research has established that a gender gap generally exists in the amount of time women versus men spend helping their parents (e.g., Laditka & Laditka, 2000; Lee et al., 2003; Sarkisian & Gerstel, 2004). This gap persists across nationally representative samples and using broad operational definitions of help. There is, however, also evidence that men and women help parents in "gender appropriate" ways, with women taking on personal care and housework tasks, whereas men help with home maintenance, outdoor work, running errands, and transportation, although these types of findings often rely on small or idiosyncratic samples (Matthews & Heidorn, 1998). It is, therefore, not clear whether time-based measures that focus more specifically on helping tasks will reveal gender differences in helping time using national samples.

Although studies that examine gender differences in emotional support or the giving of advice are less prevalent, there is limited evidence that women spend more time providing emotional support to parents than men do (Broese van Groenou & Knipscheer, 1999). Related research indicates that women also maintain more regular contact with their parents than men do (Lee et al., 2003), which may facilitate the provision of emotional support by women to their parents. Overall, previous research suggests that women tend to provide more time-based help generally as well as emotional help to parents than men do. Previous findings on time spent specifically in unpaid task assistance are more mixed and suggest that the types of tasks highlighted may influence gender differences in helping time.

Research examining gender gaps in the amount of help provided to other types of relatives is more limited, and studies examining the interplay of gender and assistance to in-laws have been inconsistent. Some studies indicate that wives, through their closer ties with their own parents, draw their husbands into providing more help to wives' parents than wives provide to husbands' parents (Gerstel & Gallagher, 2001; Lee et al., 2003; Shuey & Hardy, 2003). On the other hand, there is also evidence indicating that women, as primary caregivers, are more likely than their male partners to care for their in-laws (see review in Allen et al., 2000). In sum, a gender gap in time-based help to in-laws is not firmly established, and, when one is observed, the direction of the gap (viz., favoring women or favoring men) is not clear.

Taken together, past evidence indicates that a gender gap is likely to persist across different types of time-based assistance to parents. It is less certain whether these gaps will be identified in time-based assistance to in-laws. Few studies have examined differences when helping time is assessed more specifically as time in unpaid task assistance or emotional support for both parents and in-laws using the same sample. On the basis of previous findings regarding time-based assistance to parents, we expect the following: *Women spend more time providing unpaid task assistance and emotional support to parents and in-laws than men spend* (H1).

Financial assistance to parents and in-laws. Research on gender differences in patterns of financial assistance from adult children to their parents is more limited than studies of time-based

assistance. Data drawn from a Chinese sample suggest that there are no differences in men's and women's financial contributions to parents once structural factors such as employment and household income are controlled (Zhan, 2008; Zhan & Montgomery, 2003). These studies indicate that financial assistance to parents is a function of one's ability to pay rather than gendered social norms. Whether these patterns extend to contemporary adult children in the United States is not established, and gender differences in financial transfers to parents is rarely addressed (Couch et al., 1999). We are not aware of studies examining gender differences in levels of financial assistance to in-laws; we assume below that patterns will be similar for parents and in-laws. On the basis of the existing evidence of no gender differences in levels of financial assistance to parents, we expect the following: *Women and men provide equal amounts of financial assistance to parents and in-laws, controlling for employment status and household income (H2).*

Employment and Assistance

Employment and helping time. An underlying assumption in many individual-level studies of employment and kin assistance is that time in paid work substitutes for time spent helping kin—that is, the more hours worked, the less time spent helping (e.g., Boaz et al., 1999). Evidence of such a straightforward time substitution process is mixed, however. Some studies have indeed demonstrated that employment is associated with giving less help to parents. Employment status (Gerstel & Gallagher, 1994; Sarkisian & Gerstel, 2004), work hours (Boaz et al., 1999; Etnier, 1995), higher wages (Couch et al., 1999; Sarkisian & Gerstel), and self-employment (Sarkisian & Gerstel) have all been shown to reduce helping time, although effects are sometimes more pronounced for men than for women. Yet other research indicates that women's propensity to help parents or other relatives, in particular, is not reduced by employment generally (Brody & Schoonover, 1986; Broese van Groenou & Knipscheer, 1999; Himes, Jordan, & Farkas, 1996; Ikkink, van Tilburg, & Knipscheer, 1999; Matthews & Rosner, 1988) or characteristics of employment such as work hours (Broese van Groenou & Knipscheer; Himes et al.).

It is also possible to think of time substitution processes occurring among individuals within

households. The assumption is that a nonemployed household member can substitute his or her time in place of another household member whose time may be more limited by employment (Gerstel & Gallagher, 2001). Thus, we might expect that individuals in dual-earner couples will have less time to give to parents than individuals in single-earner couples because there is less opportunity for substitution across couple members. This process has not been extensively tested in previous research. In one of the rare studies to consider the influence of a spouse's employment as well as an individual's employment on the amount of time-based help to parents, Boaz et al. (1999) found that full-time employed individuals with a full-time employed spouse give less time to parents than individuals in couples with just one full-time wage-earner, consistent with a couple-level time substitution process. Following the findings of Boaz et al. (1999), we expect to find the following: *Individuals in dual-earner couples give less time-based assistance to parents and in-laws than individuals in single-earner couples do (H3).*

Employment and financial assistance. Individual employment is linked to financial assistance to parents, particularly through income. Research indicates that, as wage levels and household income increase, employed individuals give more money and less time to parents (Couch et al., 1999; Zissimopoulos, 2001). Economists also point to a theoretical link between the relative earnings of individuals in couples and bargaining power over the distribution of joint financial resources (Lundberg & Pollack, 1996). These models would predict that individuals in dual-earner households would have less power to influence the distribution of household income than single earners because an employed partner has more power to bargain over resource allocation than a nonemployed partner. Thus, relative bargaining power is reduced when one's spouse is employed. If we assume that individuals have a stronger preference to provide financial help to their own parents rather than their in-laws, then reduced relative bargaining power introduced by a partner's employment should reduce the level of financial assistance given to parents and increase the level of financial assistance given to in-laws. Thus, we expect to find the following: *Employed individuals in dual-earner couples give less money to parents than employed individuals in single-earner couples do, controlling*

for household income (H4a) and employed individuals in dual-earner couples give more money to in-laws than employed individuals in single-earner couples do, controlling for household income (H4b).

Other Factors Shaping Help to Relatives

Characteristics of adult children. Previous research has established that a number of characteristics influence the amount of time and money help given to parents. As adult children age, they are less likely to give time-based help to parents (Couch et al., 1999; Laditka & Laditka, 2001). Research on race differences in the provision of time-based help has been mixed; some studies find no race differences in help to parents, whereas others do find differences (Dilworth-Anderson, Williams, & Gibson, 2002). Other research suggests that race does influence levels of financial help to parents, with non-Whites providing greater levels of financial assistance than Whites (Boaz et al. 1999; Couch et al., Shuey & Hardy, 2003). It is not clear whether adult children with more education or less provide more time-based help; education has not been critical in distinguishing levels of financial assistance (Couch et al.; Himes et al., 1996; Laditka & Laditka, 2001). We also know that individuals in poor health themselves are less likely to provide time-based help to parents (Laditka & Laditka, 2001), although this does not appear to be linked to levels of financial assistance (Couch et al.; Shuey & Hardy). In addition, although previous research has examined differences in the amount of parental help among married versus single adults, we are not aware of findings related to cohabiting status. Because we include both married and cohabiting couples in our sample, we control for cohabiting status in all models. We also include information about the presence of minor children in the home as well as the number of brothers and sisters a respondent has, as some previous research has found these factors to be associated with less time- and money-based help (e.g., Boaz et al.; Himes et al.; Sarkisian & Gerstel, 2004). In addition, adult children's income is positively associated with levels of financial assistance (Shuey & Hardy; Zhan & Montgomery, 2003).

Parent characteristics. Not surprisingly, a parent's poor health is a key positive predictor of unpaid task assistance and emotional support

time by adult children (Shuey & Hardy, 2003). We also include information about parent's financial problems, which are positively related to levels of financial assistance (Couch et al., 1999; Zhan, 2008). We do not have information on in-law health or finances. In addition, coresidence and geographic proximity are strong predictors of giving time-based help to a parent (Shuey & Hardy). Unfortunately, data on proximity as well as the gender and marital status of a parent or in-law are not available to us. Thus, we include as controls in our models both characteristics of the adult child (age, race, education, cohabiting status, respondent health, presence of minor children in the home, number of brothers, number of sisters, log of annual household income) and characteristics of parents (parental health, financial needs, and coresidence status).

METHOD

Data

This study utilizes survey data from the 1995 National Survey of Midlife Development in the United States (MIDUS). The original purpose of the MIDUS study was to support interdisciplinary investigation of the patterns, predictors, and consequences of midlife development in the areas of physical health, well-being, and social responsibility. MIDUS respondents were drawn from a nationally representative random digit dial sample of noninstitutionalized, English-speaking adults, ages 25 – 74. The study design included an oversampling of older respondents and men to support gender comparisons by age. To ensure generalizable results, we use analytic weights constructed by MIDUS staff to adjust for differences in probability of selection and differential nonresponse and to match the sample to the U.S. adult population in age, gender, and racial composition (see <http://midmac.med.harvard.edu/research.html>). The sample with respondents who completed both a telephone survey and a self-administered questionnaire consists of 3,032 individuals with an overall response rate of 61%. We use a subsample of married and cohabiting respondents in our analyses ($n = 2,085$), or 68.7% of the original sample. We also exclude from parent models ($n = 29$, 1.3%) respondents whose parents are both deceased. All analyses are conducted using STATA 9.2 (StataCorp, 2005).

Measures

Dependent variables. Six dependent variables tap levels of unpaid task assistance and emotional support (hours/month) as well as financial assistance (dollars/month) to parents or in-laws. To capture time spent in unpaid task assistance, respondents were asked: "On average, about how many hours per month do you spend providing unpaid assistance (such as help around the house, transportation, or childcare) to the following people?" To capture time spent providing emotional support, respondents were asked: "On average, about how many hours per month do you spend giving informal emotional support (such as comforting, listening to problems, or giving advice) to each of the following people?" Responses to both questions included: "Your parents or the people who raised you," or "In-laws." Financial assistance is measured as follows: "On average about how many dollars per month do you or your family living with you contribute to: a) your parents or the people who raised you; b) your in-laws." Cases with missing data on a dependent variable (2.7% – 5%) are excluded from the analysis.

Key independent variables. Gender, own and partner employment, and own and partner work hours are the independent variables of critical interest. Gender is measured dichotomously (0 = male; 1 = female). Employment status variables are also dichotomous (0 = not employed; 1 = employed). Work hours (for respondent and partner) are continuous variables. Missing values for work hours (less than 1% for individuals, 2% for partners) were imputed using information about gender, self-employment, and couple employment status (i.e., in dual-earner couple, single-earner couple).

Controls. Models control for a series of respondent characteristics including age (in years), race (Black, Other; comparison group is White), marital status (1 = cohabiting; 0 = married), education (less than high school, high school diploma, some college; comparison group is college degree or better), and a continuous variable tapping a respondent's perceived physical health ("In general, would you say your physical health is...;" 1 = poor; 5 = excellent). Other variables measure the respondent's family situation, including whether there are children under 18 in the household (1 = yes; 0 = no), the total number of brothers or sisters a respondent has

(measured separately), and the logged annual household income. Two of these variables (total number of brothers and total number of sisters) had small amounts of missing data (<1.5%). Mean imputation was used to keep these cases in the analysis, consistent with recommendations in Schafer and Graham (2002).

Other control variables tap coresidence with the respondent and parents' health or financial need. Adult children were asked, "During the past 12 months, have you had any of the following people live with you?" (1 = lives with 1 or more aging parents; 0 = otherwise). We also include a measure of parent health. MIDUS respondents were asked whether a parent has a "chronic disease or disability" or "frequent minor illnesses." Responses to these two questions were combined to capture overall parent health (1 = has chronic disease/frequent illnesses; 0 = otherwise). Finally, we control for parent financial problems (1 = parent has financial problems (low income or heavy debt) in last 12 months; 0 = otherwise).

Analytic Strategy

We use zero-inflated negative binomial models (ZINB) to assess whether gender and couples' employment context influence the number of monthly hours of unpaid task assistance or emotional support as well as the average dollars per month provided to parents or in-laws. The dependent variables are count variables that range from 0 to 720 average hours per month, or from \$0 to \$1,000 per month. Thus, a series of models appropriate for count data were considered, including a poisson regression model (PRM), a negative binomial model (NBRM), and a ZINB (Cameron & Trivedi, 1998). Problems with overdispersion and a large number of zeros (ranging from 43% to 92%) favor the use of a ZINB model, as does previous research using a similarly measured dependent variable (Sarkisian & Gerstel, 2004). Analyses of the goodness of fit of various models using appropriate likelihood ratio tests as well as a reliance on Vuong tests (Long & Freese, 2001) also provided evidence in favor of the model (see the Appendix for more information on model selection).

ZINB models differ from other count models (PRM, NBRM) by allowing zeros to be generated by two distinct processes. In PRM and NBRM the probability of a positive outcome differs across individuals according to his or her characteristics

but assumes all respondents have some probability of a positive outcome. This would be unrealistic if some people are not potential helpers of their parents or in-laws. Adult children could be estranged from their parents or otherwise incapable of helping in ways we cannot, or do not, measure. ZINB models account for this possibility by increasing the conditional variance and the probability of zero counts (Long, 1997). In short, the choice of a ZINB model is supported both statistically and substantially. Our estimation strategy, then, is to model average time spent assisting or emotionally supporting parents or in-laws and average monthly financial contribution to parents and in-laws in six separate equations that include all of the independent variables documented above as well as interaction terms that include own and partner employment and gender where appropriate. In addition to reporting coefficients and standard errors from each regression model, we also produce estimates of average monthly time in unpaid task assistance or emotional support and of average monthly contribution for "typical" respondents who differ in terms of gender, own employment, and partner employment.

RESULTS

Table 1 displays weighted descriptive statistics and variable by variable *ns* for the married/cohabiting sample ($n = 2,085$) and for men ($n = 1,121$) and women ($n = 964$) in married or cohabiting couples. Consistent with previous research and providing preliminary support for H1, combined reports of hours spent per month providing either unpaid task assistance or emotional support to parents or in-laws among partnered people showed that women spent more time assisting parents than men did, both in total hours per month (31.0 vs. 13.5) as well as with regard to each type of time-based assistance to parents or in-laws. Because these variables are highly skewed, *t* tests of differences were not performed. Rather, ZINB models containing gender as the single covariate (not shown) confirmed that gender differences in emotional support time to parents or in-laws were statistically significant, whereas differences in unpaid task assistance time to parents or in-laws were not. In contrast to patterns of time use, patterns of money use indicated that men gave more money per month to parents and in-laws (\$16.60/month vs. \$12.13/month); an analysis of gender-only models (not shown), however, suggested that

these differences were not statistically significant, providing preliminary support for H2.

Overall, the descriptive data indicated that the biggest time difference between partnered women and men was in time spent giving emotional support to parents—partnered women spent substantially more time per month engaged in this sort of help than partnered men did (16.5 hours/month vs. 4.2 hours/month). The gaps were much smaller for time spent providing emotional support to in-laws (5.4 hours/month vs. 2.5 hours/month). In addition, the relatively large estimate of overall hours per month partnered women spent helping parents or in-laws was found to be largely a function of the time these women spent providing emotional support to their own parents. Over half of the 31 average monthly hours partnered women reported can be accounted for by their time engaged in emotional support to their parents. Moreover, the descriptive data indicated that, on average, most partnered women *and* men spent what time they had to help their parents; time spent helping in-laws was more limited.

Tables 2–4 provide coefficients and standard errors from full ZINB models of unpaid task assistance, emotional support, and financial assistance to parents and in-laws. Although we did run models interacting gender, own, and partner employment, these terms were never significant and are not reported. Interpretation of coefficients in the count and binary portions of the ZINB model mirror interpretations of coefficients in negative binomial regression models (NBRM) and binary logit models, respectively. For example, in the model of emotional support to parents in Table 3, the gender coefficient was significant in the count ($b = 0.912$; $p < .01$) but not the binary ($b = -0.492$) portion of the model. These coefficients are most easily interpreted by calculating the factor change in the expected count for a unit increase in X (e^b). For example, among those who had the opportunity to provide emotional support to parents, being female rather than male increased the expected monthly hours of emotional support by a factor of 2.5 ($e^{0.912}$), controlling for other factors in the model. Alternatively, the binary portion of the model indicated that being female decreased the odds of not having the opportunity to help parents by a factor of 6.1 ($e^{-0.492}$), although this latter result was not statistically significant. Thus, the model showed that women and men were equally likely to be in a position to provide emotional support to parents, yet

Table 1. *Weighted Descriptive Statistics for the 1995 MIDUS Married/Cohabiting Sample and Subsamples of Married/Cohabiting Men and Women*

Variables	All Married/Cohabiting (N = 2,085)			Men (n = 1,121)			Women (n = 964)		
	Mean/%	SE	N	Mean/%	SE	N	Mean/%	SE	N
Dependent									
Unpaid assistance to parent(s) (avg. monthly hours)	6.15	1.04	2,007	4.98	1.60	1,081	7.18	1.36	926
Unpaid assistance to in-law(s) (avg. monthly hours)	2.00	0.38	2,006	1.86	0.28	1,082	2.11	0.66	924
Emotional support to parent(s) (avg. monthly hours)	10.75	1.45	1,981	4.21	0.41	1,069	16.52	2.69	912
Emotional support to in-law(s) (avg. monthly hours)	4.06	0.76	2,001	2.48	0.29	1,078	5.44	1.41	923
Financial assistance to parent(s) (avg. monthly \$)	\$9.42	1.27	1,999	\$11.13	2.28	1,072	\$7.92	1.30	927
Financial assistance to in-law(s) (avg. monthly \$)	\$4.78	0.71	1,999	\$5.43	1.24	1,073	\$4.21	0.76	926
Independent									
% female	0.53	0.01	2,085	—	—	—	—	—	—
Age (years)	44.52	0.35	2,085	45.14	0.46	1,121	43.98	0.51	964
% White	0.89	0.01	2,085	0.89	0.01	1,121	0.89	0.01	964
% Black	0.07	0.01	2,085	0.07	0.01	1,121	0.08	0.01	964
% Other	0.04	0.00	2,085	0.04	0.01	1,121	0.03	0.01	964
% cohabiting (remainder are married)	0.09	0.01	2,085	0.08	0.01	1,121	0.09	0.01	964
% less than HS education	0.11	0.01	2,083	0.12	0.01	1,119	0.10	0.01	964
% HS degree	0.41	0.01	2,083	0.37	0.02	1,119	0.44	0.02	964
% some college	0.25	0.01	2,083	0.23	0.01	1,119	0.27	0.02	964
% college/professional degree	0.23	0.01	2,083	0.28	0.01	1,119	0.20	0.01	964
R's perceived health (1 = poor; 5 = excellent)	3.45	0.03	2,085	3.49	0.03	1,121	3.42	0.04	964
% with any children under 18 at home	0.50	0.01	2,085	0.50	0.02	1,121	0.50	0.02	964
Total number of brothers	1.66	0.04	2,085	1.63	0.05	1,121	1.70	0.06	964
Total number of sisters	1.61	0.04	2,085	1.63	0.06	1,121	1.59	0.06	964
Household income (annual; in \$)	59,870.38	1,101.59	2,085	64,527.26	1,629.81	1,121	55,766.24	1,477.53	964
% coresiding with parent(s)	0.03	0.00	2,085	0.03	0.01	1,121	0.03	0.01	964
% with parent(s) who have frequent/chronic illnesses	0.31	0.01	1,991	0.29	0.02	1,073	0.33	0.02	918
% with parent(s) who have financial difficulties	0.12	0.01	1,958	0.11	0.01	1,052	0.14	0.01	906
% respondent is employed	0.76	0.01	2,083	0.84	0.01	1,121	0.69	0.02	962
% respondent's partner is employed	0.72	0.01	2,085	0.64	0.02	1,121	0.79	0.02	964
Avg. weekly work hours at R's main job	31.27	0.56	2,083	38.51	0.74	1,121	24.89	0.75	962
Avg. weekly work hours of R's partner	28.89	0.57	2,084	22.19	0.69	1,121	34.79	0.83	963
% of R's in dual-earner couples	0.57	0.01	2,085	0.55	0.02	1,121	0.59	0.02	964
% of R's in male single-earner couples	0.23	0.01	2,085	0.29	0.02	1,121	0.19	0.01	964
% of R's in female single-earner couples	0.08	0.01	2,085	0.06	0.01	1,121	0.10	0.01	964
% of R's where neither couple member works	0.11	0.01	2,085	0.10	0.01	1,121	0.12	0.01	964

Note: Weighted descriptive statistics are calculated using an analysis sample of 1,831. Nonweighted Ns are provided for each variable to document missing data.

Table 2. Coefficients and Standard Errors From ZINB Models of Unpaid Task Assistance to Parents and In-Laws

	Parents		In-Laws	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Count equation				
Adult child characteristics				
Female (1 = <i>yes</i>)	0.253	0.184	0.149	0.238
Age (in years)	0.017	0.009	-0.021*	0.009
Black	0.711	0.376	0.096	0.314
Other (compared to Whites)	1.091*	0.433	-0.389	0.396
Cohabiting (0 = <i>married</i>)	1.459***	0.424	-0.063	0.335
Less than high school	1.046***	0.274	0.739*	0.364
High school diploma	0.517**	0.190	0.280	0.236
Some college (compared to college degree or better)	1.174***	0.224	0.898***	0.267
R's physical health (1 = <i>poor</i> ; 5 = <i>excellent</i>)	-0.163*	0.077	-0.041	0.114
Minor children in household (1 = <i>yes</i>)	-0.006	0.188	-0.394	0.216
Total # of brothers	0.051	0.063	0.119	0.072
Total # of sisters	-0.021	0.059	0.121	0.062
Log of annual household income	0.018	0.046	-0.105*	0.046
Parent(s) characteristics				
Coresides with child (1 = <i>yes</i>)	0.790	0.411	1.595**	0.559
Parent's health (1 = <i>parent has chronic illness/disability</i>)	-0.108	0.164	-0.089	0.182
Parent's finances (1 = <i>parent has financial problems</i>)	-0.536**	0.182	-0.206	0.248
Couple's employment context				
Respondent is employed	0.076	0.364	0.806	0.497
Respondent avg. work hours/week	-0.004	0.007	-0.013	0.011
Partner is employed	-0.366	0.262	-0.628*	0.308
Partner avg. work hours/week	0.009	0.006	0.010	0.008
Constant	0.766	0.867	2.764**	0.853
Binary equation				
Adult child characteristics				
Female (1 = <i>yes</i>)	0.528	0.320	0.710**	0.262
Age (in years)	0.104***	0.020	0.038**	0.012
Black	-1.558*	0.633	0.167	0.442
Other (compared to Whites)	-0.199	0.582	-0.647	0.909
Cohabiting (0 = <i>married</i>)	1.763**	0.595	1.517***	0.448
Less than high school	-0.893	0.537	-0.150	0.393
High school diploma	-0.465	0.396	-0.213	0.277
Some college (compared to college degree or better)	0.123	0.366	0.010	0.278
R's physical health (1 = <i>poor</i> ; 5 = <i>excellent</i>)	-0.236	0.148	-0.023	0.111
Minor children in household (1 = <i>yes</i>)	0.569	0.359	-0.318	0.250
Total # of brothers	0.106	0.102	-0.103	0.080
Total # of sisters	0.191*	0.094	0.044	0.062
Log of annual household income	0.282	0.301	-0.045	0.041
Parent(s) characteristics				
Coresides with child (1 = <i>yes</i>)	-2.787	1.773	0.201	0.429
Parent's health (1 = <i>parent has chronic illness/disability</i>)	-2.403	1.535	-0.236	0.226

Table 2. *Continued*

	Parents		In-Laws	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Parent's finances (1 = <i>parent has financial problems</i>)	-1.503	0.974	-0.646	0.375
Couple's employment context				
Respondent is employed	0.347	0.726	0.496	0.450
Respondent avg. work hours/week	-0.018	0.013	-0.011	0.010
Partner is employed	-0.568	0.599	-0.454	0.388
Partner avg. work hours/week	-0.006	0.016	0.008	0.009
Constant	-6.674	3.446	-0.600	1.029
Log α	1.378***	0.179	1.013***	0.285
Log likelihood	-3524.084		-2329.448	
<i>N</i>	1,908		1,904	

Source: 1995 MIDUS married/cohabiting respondents ($n = 2,085$).

* $p < .05$. ** $p < .01$. *** $p < .001$.

women helpers spent more time providing this support than men helpers. To aid in interpretation and augment the information provided by coefficients in the tables, we also report below expected amounts of unpaid task assistance, emotional support, and financial assistance for key variants of gender and couples' employment context.

Table 2 presents coefficients and standard errors from full ZINB models of unpaid task assistance to parents and in-laws. Gender coefficients in the count and binary equations modeling time in unpaid task assistance to parents were not significant. Thus, the model for parents indicated that men and women had equal opportunity to provide unpaid task assistance to parents and, among those who gave this help to parents, there were no gender differences in average monthly hours, a finding that is contrary to H1. In the in-law model, the gender coefficient for the binary equation was significant ($p < .01$), suggesting that women were more likely to have the opportunity to give unpaid task assistance to in-laws, although we found no gender difference in the monthly average hours of assistance provided, again contrary to H1.

Patterns were different for emotional support to parents and in-laws (Table 3). Here, gender coefficients in the count equations for the parent and in-law models were significant (although coefficients for the binary portion were not). Controlling for all other variables, the model of parental emotional support predicted that men provided about 5.5 hours/month of support whereas women provided about 14 hours/month, a sizable

difference in time-based help. As the descriptive data already suggested, and the full models confirmed, gender differences were not found to be as dramatic for monthly emotional support to in-laws. Here, the model predicted that, controlling for other factors, men provided 2.7 hours/month of emotional support to in-laws, whereas women provided 4.1 hours/month. Overall, the results for time-based assistance (Tables 2 and 3) showed only partial support for H1. We found that women spent more time providing emotional support to their own parents and to their in-laws than men did, as expected. There was, however, no evidence of a gender gap in time spent providing unpaid task assistance (i.e., help around the house, transportation) to parents *or* in-laws. With respect to financial help, Table 4 confirmed the descriptive results and documented that there were no gender gaps in the amount of financial assistance provided per month to parents or in-laws, a finding that is consistent with limited previous research (Zhan & Montgomery, 2003) and that supports H2.

Do joint employment patterns influence time- and money-based help? The results here demonstrated that joint employment was not uniformly significant across models, but both employment status and work hours were associated with time- and money-based help in particular circumstances. Couples' employment context (own and partner employment, work hours) were not significant predictors of time spent in unpaid task assistance to parents; partner's employment status, however, was a significant predictor of time spent in unpaid task assistance to in-laws.

Table 3. Coefficients and Standard Errors From ZINB Models of Emotional Support to Parents and In-Laws

	Parents		In-Laws	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Count equation				
Adult child characteristics				
Female (1 = yes)	0.912***	0.169	0.520**	0.173
Age (in years)	-0.009	0.007	-0.023*	0.009
Black	0.553	0.298	0.386	0.384
Other	0.302	0.27	0.019	0.272
(compared to Whites)				
Cohabiting (0 = married)	0.704*	0.279	0.382	0.357
Less than high school	1.368***	0.352	1.654***	0.379
High school diploma	0.554**	0.186	0.771***	0.191
Some college	0.736***	0.191	0.724***	0.204
(compared to college degree or better)				
R's physical health (1 = poor; 5 = excellent)	-0.152*	0.074	0.065	0.087
Minor children in household (1 = yes)	-0.108	0.153	-0.229	0.174
Total # of brothers	-0.003	0.049	-0.098	0.051
Total # of sisters	0.135*	0.061	0.125*	0.054
Log of annual household income	-0.076*	0.033	-0.100**	0.033
Parent(s) characteristics				
Coresides with child (1 = yes)	0.441	0.326	-0.202	0.249
Parent's health (1 = parent has chronic illness/disability)	-0.163	0.153	-0.676***	0.168
Parent's finances (1 = parent has financial problems)	-0.06	0.184	0.498	0.254
Couple's employment context				
Respondent is employed	0.37	0.381	0.304	0.462
Respondent avg. work hours/week	-0.007	0.008	-0.011	0.009
Partner is employed	-0.138	0.242	-0.326	0.284
Partner avg. work hours/week	0.005	0.005	-0.001	0.006
Constant	2.757***	0.728	3.010***	0.812
Binary equation				
Adult child characteristics				
Female (1 = yes)	-0.492	0.385	0.657	0.489
Age (in years)	0.152***	0.024	0.056*	0.022
Black	-0.794	0.79	-0.18	1.113
Other	-0.4	0.552	0.423	0.593
(compared to Whites)				
Cohabiting (0 = married)	1.936***	0.519	2.951***	0.674
Less than high school	1.229*	0.587	1.399*	0.583
High school diploma	0.462	0.436	0.533	0.432
Some college	0.589	0.447	-0.476	0.676
(compared to college degree or better)				
R's physical health (1 = poor; 5 = excellent)	-0.129	0.133	-0.024	0.171
Minor children in household (1 = yes)	-0.088	0.421	-1.438*	0.67
Total # of brothers	0.202*	0.092	-0.324**	0.121
Total # of sisters	0.149	0.103	0.051	0.107
Log of annual household income	-0.127**	0.042	-0.153**	0.056
Parent(s) characteristics				
Coresides with child (1 = yes)	-1.044	0.792	-3.141	2.064
Parent's health (1 = parent has chronic illness/disability)	-5.018***	0.719	-1.321*	0.562

Table 3. *Continued*

	Parents		In-Laws	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Parent's finances (1 = parent has financial problems)	-2.898*	1.206	0.096	0.681
Couple's employment context				
Respondent is employed	0.034	0.727	-0.211	0.648
Respondent avg. work hours/week	-0.011	0.016	0	0.014
Partner is employed	-0.696	0.671	0.164	0.596
Partner avg. work hours/week	-0.002	0.014	-0.014	0.014
Constant	-6.019***	1.415	-1.178	1.49
Log α	0.813***	0.03	1.279***	0.084
Log likelihood	-5072.61		-3597.02	
<i>N</i>	1884		1900	

Source: 1995 MIDUS married/cohabiting respondents ($n = 2,085$).

* $p < .05$. ** $p < .01$. *** $p < .001$.

Predicted values of monthly time can elucidate the size of this difference. Time estimates of unpaid task assistance to in-laws showed that individuals in dual-earner couples gave 1.3 hours/month, whereas individuals in single-earner couples gave 1.8 hours/month. In sum, the general pattern for unpaid task assistance to in-laws was that having an employed partner is associated with giving 38% less time to in-laws among both men and women helpers, a finding that is consistent with limited previous research (Boaz et al., 1999) and that supports H3. Variables tracking couples' employment context were not significant in models of emotional support to parents or in-laws. On the whole, there was only partial support for the idea that individuals in dual-earner couples gave less time to relatives than individuals in single-earner couples (H3), because this pattern was only observed in models of unpaid task assistance to in-laws.

As noted earlier, the results in Table 4 document that gender was not a significant predictor of financial assistance to parents or in-laws; respondent work hours and partner employment status, however, were related to financial assistance to parents (but not to in-laws). We again use expected values to illustrate the effects of changes in women's work hours and partner employment status (employed or not). Controlling for other variables in the model, the expected monthly contribution to parents for part-time (assumed to be 20 hours/week) employed women in dual-earner couples where the man is employed full-time (assumed to be 40 hours/week) was \$4.47/month. The expected monthly

contribution to parents for full-time employed women in dual-earner couples with a full-time employed man was \$6.37/month, a 42% increase. We can also estimate financial contributions for employed women coupled with nonworking partners. Here, a full-time employed woman in a couple with a nonworking man was expected to give \$8.91/month to her parent(s).

The predicted values illustrate two general trends we observed in parental financial help. First, one's own employment effort was positively related to parental financial support—the more one worked for pay, the more money one gave to parents. Thus, part-time employees gave less money per month than full-time employees, regardless of gender of employee. This general effect, however, was influenced by spouses' employment status. Similar to the pattern observed for unpaid task assistance to in-laws, employed individuals in dual-earner couples gave less money than employed individuals in single-earner couples, even after we controlled for household income, consistent with H4a. Overall, full-time employed individuals of either gender contributed 40% more to parents if their spouse was not employed. There was no support for a family bargaining process in which dual-earner individuals gave more financial assistance to in-laws than single-earner individuals, however, contrary to the expectation in H4b.

DISCUSSION

Prior research on the gender gap in help to parents indicates that time-based gaps in help to parents

Table 4. Coefficients and Standard Errors From ZINB Models of Financial Assistance to Parents and In-Laws

	Parents		In-Laws	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Count equation				
Adult child characteristics				
Female (1 = yes)	-0.125	0.215	0.328	0.246
Age (in years)	0.017	0.009	0.032***	0.009
Black	0.469	0.292	0.132	0.318
Other	0.730**	0.240	0.393	0.368
(compared to Whites)				
Cohabiting (0 = married)	1.127***	0.342	0.644	0.368
Less than high school	-0.172	0.297	-0.180	0.307
High school diploma	0.198	0.223	-0.232	0.255
Some college	0.262	0.201	-0.347	0.244
(compared to college degree or better)				
R's physical health (1 = poor; 5 = excellent)	0.158	0.084	0.289**	0.097
Minor children in household (1 = yes)	-0.014	0.215	0.306	0.231
Total # of brothers	0.160*	0.063	-0.014	0.064
Total # of sisters	0.042	0.082	0.138*	0.056
Log of annual household income	0.167***	0.047	0.199	0.127
Parent(s) characteristics				
Coresides with child (1 = yes)	0.951***	0.266	0.403	0.324
Parent's health (1 = parent has chronic illness/disability)	-0.154	0.165	-0.088	0.199
Parent's finances (1 = parent has financial problems)	0.250	0.177	0.301	0.240
Couple's employment context				
Respondent is employed	-0.438	0.355	-0.487	0.393
Respondent avg. work hours/week	0.013*	0.007	0.013	0.008
Partner is employed	-0.614*	0.275	-0.305	0.386
Partner avg. work hours/week	0.003	0.006	-0.002	0.007
Constant	0.739	0.854	-0.878	1.565
Binary equation				
Adult child characteristics				
Female (1 = yes)	-0.206	0.196	-0.120	0.209
Age (in years)	0.010	0.010	0.018	0.010
Black	-1.376***	0.329	-0.701*	0.346
Other	-0.732*	0.307	0.253	0.434
(compared to Whites)				
Cohabiting (0 = married)	0.293	0.344	1.523*	0.607
Less than high school	-0.040	0.349	-0.140	0.357
High school diploma	0.380	0.226	0.429	0.250
Some college	0.378	0.211	0.253	0.227
(compared to college degree or better)				
R's physical health (1 = poor; 5 = excellent)	-0.068	0.093	-0.122	0.098
Minor children in household (1 = yes)	0.051	0.193	0.065	0.222
Total # of brothers	0.023	0.059	-0.059	0.059
Total # of sisters	0.046	0.060	-0.069	0.058
Log of annual household income	0.004	0.037	0.003	0.081
Parent(s) characteristics				
Coresides with child (1 = yes)	-1.491***	0.371	-0.316	0.412
Parent's health (1 = parent has chronic illness/disability)	-0.600**	0.187	-0.291	0.218

Table 4. *Continued*

	Parents		In-Laws	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Parent's finances (1 = parent has financial problems)	-1.019***	0.224	-0.658*	0.267
Couple's employment context				
Respondent is employed	-0.214	0.389	0.129	0.392
Respondent avg. work hours/week	-0.005	0.007	0.000	0.008
Partner is employed	-0.242	0.384	-0.556	0.393
Partner avg. work hours/week	-0.002	0.008	0.009	0.009
Constant	2.712***	0.787	2.258	1.161
Log α	0.010	0.106	-0.234	0.161
Log likelihood	-1959.742		-1447.118	
<i>N</i>	1901		1899	

Source: 1995 MIDUS married/cohabiting respondents ($n = 2,085$).

* $p < .05$. ** $p < .01$. *** $p < .001$.

in which women spend more time helping than men do are pervasive, with more limited evidence suggesting that these gaps are influenced by individual employment characteristics. We have expanded on this research by examining estimates of different forms of time and money help to both parents and in-laws while also examining how couples' employment context (own and partner employment status and work hours) shapes the level of help using a nationally representative sample of married or cohabiting individuals. This study extends our understanding of the influences of gender and couples' employment on time and money assistance to parents and in-laws by documenting that (a) gender gaps are not consistently identified when different types of help to parents and in-laws are considered and (b) joint employment is not a critical factor shaping time-based help among partnered individuals but is important in influencing financial assistance to parents. Overall, the study highlights the importance of examining both gender and joint employment patterns in a range of helping activities to different types of relatives.

Our analyses show only partial support for time-based gender gaps in which women provide more time-based help to relatives than men provide (H1). These gaps are clearly identified for time spent providing emotional support to both parents and in-laws, but not for time spent providing unpaid task assistance. That women's time is largely spent providing emotional support rather than other forms of assistance has potential implications for researchers interested in the relation-

ship between women's time in adult caregiving and caregiver health outcomes. A general finding in this literature is that caregiving is associated with psychological distress for women but not men (although studies comparing both genders are limited) even in studies in which caregiving tasks are very broadly measured (Pavalko & Woodbury, 2000). Perhaps it is women's propensity to provide significant amounts of emotional support over other types of assistance that explains this relationship. Regular exposure to relatives' worries, complaints, or need to talk through difficult issues may be a drain on women's psychological health over time. Certainly other studies have found that one of the costs of kinkeeping is higher exposure to strains as well as supports (Wethington, Moen, Glasgow, & Pillemer, 2000). Future research examining the link between caregiving and distress in women should investigate the relationship between the amount of time women spend in emotional support of relatives and women's psychological well-being.

A second significant contribution of this study is an analysis of time-based help to parents and in-laws, as most previous research focuses only on help to parents. Our descriptive data indicate that the overall time per month spent assisting in-laws is small relative to time given to parents. This is important because it suggests that couple members are not necessarily interchangeable when it comes to time-based relative help. Instead, adult children tend to give the bulk of their time to their own parents while providing much smaller levels of assistance to in-laws. We also show that women spend more time than men providing

emotional support to in-laws but that unpaid task assistance time provided to in-laws is the same for women and men. Taken together, the results from the MIDUS data lend support to the notion that women are primary emotional support providers, whether to their own parents or their male partner's parents. Further, our analyses indicate that levels of unpaid task assistance to in-laws are influenced by couples' employment context; single-earners tend to provide greater levels of unpaid help than those in dual-earner couples, providing partial support for H3. Why? One possibility may be that nonemployed partners free up employed individuals to provide more in-law assistance by taking care of other household tasks. In addition, we speculated earlier that time spent in unpaid task assistance might be more sensitive to structural constraints such as employment than time spent in emotional support. Our findings lend credence to this possibility in that unpaid task assistance to in-laws is influenced by joint employment patterns, whereas emotional support (whether to parents or in-laws) is not. Furthermore, the patterns here suggest that time spent in unpaid task assistance to one's own parents is less sensitive to structural constraints such as employment than assistance to in-laws is, indicating that these associations vary by the type of relative helped.

A final contribution of this study is an examination of gender and joint employment differences in providing financial assistance to parents and in-laws. Consistent with limited past research and H2, we do not find any evidence of a gender gap in financial assistance to parents and in-laws. We did find that couples' joint employment patterns influence the amount of assistance given to parents, consistent with the expectation in H4a. Work hours are positively associated with monthly financial assistance to parents, although an employed partner reduces the size of the monthly contribution. We speculate that this is indicative of differences in bargaining power in couples. When both couple members are employed, power to secure financial resources for one's own parents is more limited. Consistent with economic theory on family bargaining processes (e.g., Lundberg & Pollack, 1996) it appears that single-earners are in a better relative position to influence the allocation of financial resources to their own parents. Yet we do not observe a similar bargaining process shaping assistance to in-laws, where dual-earners were expected to give *more* financial help to in-laws

than single earners (H4b). One explanation for this pattern could be related to the size of the monthly financial contribution for parents versus in-laws in the MIDUS data. It may be that couple-level bargaining does not occur until levels of financial assistance surpass a certain threshold amount. Note that the average monthly financial contribution to parents (\$9.72) is almost twice the size of the average monthly in-law contribution (\$4.78). Perhaps, in this sample, contributions to in-laws are too small to bargain over.

These findings should be interpreted with several limitations in mind. First, our analysis is limited to individuals in couples. We cannot generalize our findings to single women and men. Second, we are unable to identify the gender or marital status of the parent or in-law being helped in our models. Previous research has shown that unmarried parents tend to get more help from adult children and that the gender of the parent influences which child(ren) provide the care (Lee, Dwyer, & Coward, 1993). Omitted variables tend to bias coefficients in models, although it is difficult to speculate about the direction of bias in this case. Third, we are unable to exclude respondents with no living in-laws from our analysis. Thus, the coefficients in the in-law models may be predicting the chances that someone has both in-laws deceased as well as the likelihood that someone is not helping his or her in-laws. An analysis of respondents with two deceased parents shows that the incidence is small (1% of total sample), and a comparison of time estimates from parent models that include or eliminate these cases (not shown) indicates that estimates are not substantially altered if the cases with two deceased parents are included. Assuming that the number of cases with two deceased in-laws is similarly small, we do not expect their inclusion in models to influence in-law estimates substantially. Finally, we are not able to include information about other characteristics of employment for both couple members, even though such characteristics, such as wages and self-employment, have been shown to help explain differences in men's and women's time- and money-based help to parents in comparisons of individual employed men and women (Sarkisian & Gerstel, 2004). It is possible that omitted job characteristics variables produce overstated gender gaps, particularly within dual-earner couples. Even with these limitations in place, we believe our analysis of time and money help to

parents and in-laws, which incorporates joint employment patterns of married or cohabiting couples and that distinguishes several different types of help to parents and in-laws using data from a nationally representative sample, adds important information that has been missing from the literature on kin help.

We hope that future research will be better positioned to address the mechanisms that lead partnered men and women to provide different types of help in different amounts to different relatives. Certainly incorporating information about wages, self-employment, job flexibility, and other job characteristics for both couple members would provide a more precise picture of how joint employment shapes helping time and levels of financial assistance to parents and in-laws. We believe, however, that the joint employment patterns in the MIDUS data, particularly the contrast among individuals in single- and dual-earner couples, suggest that other mechanisms shaping kin help, such as time spent in other types of unpaid labor or bargaining processes in couples, should be further investigated.

NOTE

This research was supported through grants from the Graduate School and the Center on Age & Community at the University of Wisconsin – Milwaukee. We thank Marcus Britton, Laura Fingerson, J. Scott Long, Nancy Mathiowetz, Stacey Olikier, Marie Savundranayagam, and Heeju Shin for helpful comments on earlier drafts of this article.

REFERENCES

- Allen, K. R., Blieszner, R., & Roberto, K. A. (2000). Families in the middle and later years: A review and critique of research in the 1990s. *Journal of Marriage and the Family*, 62, 911 – 926.
- Antonucci, T. C. (1990). Social supports and social relationships. In R. B. L. George (Ed.), *Handbook of aging and the social sciences* (3rd ed., pp. 205 – 226). San Diego, CA: Academic Press.
- Boaz, R. F., Hu, J., & Ye, Y. (1999). The transfer of resources from middle-aged children to functionally limited elderly parents: Providing time, giving money, sharing space. *Gerontologist*, 39, 648 – 657.
- Brody, E. M., & Schoonover, C. B. (1986). Patterns of parent-care when adult daughters work and when they do not. *Gerontologist*, 26, 372 – 381.
- Broese van Groenou, M. I., & Knipscheer, C. P. M. (1999). Onset of physical impairment of independently living older adults and the support received from sons and daughters in the Netherlands. *International Aging and Human Development*, 48, 253 – 278.
- Cameron, A. C., & Trivedi, P. K. (1998). *Regression analysis of count data*. Cambridge, UK: Cambridge University Press.
- Cancian, F. M., & Olikier, S. J. (2000). *Caring and gender*. Walnut Creek, CA: Altamira Press.
- Chumbler, N. R., Pienta, A. M., & Dwyer, J. W. (2004). The depressive symptomatology of parent care among the near elderly. *Research on Aging*, 26, 330 – 351.
- Couch, K. A., Daly, M. C., & Wolf, D. A. (1999). Time? Money? Both? The allocation of resources to older parents. *Demography*, 36, 219 – 232.
- Dilworth-Anderson, P., Williams, I. C., & Gibson, B. E. (2002). Issues of race, ethnicity, and culture in caregiving research: A 20-year review (1980 – 2000). *Gerontologist*, 42, 237 – 272.
- Ettner, S. L. (1995). The opportunity costs of elder care. *Journal of Human Resources*, 31, 189 – 205.
- Gerstel, N., & Gallagher, S. (1994). Caring for kith and kin: Gender, employment, and the privatization of care. *Social Problems*, 41, 519 – 539.
- Gerstel, N., & Gallagher, S. K. (2001). Men's caregiving: Gender and the contingent character of care. *Gender and Society*, 15, 197 – 217.
- Himes, C. L., Jordan, A. K., & Farkas, J. I. (1996). Factors influencing parental caregiving by adult women: Variations by care intensity and duration. *Research on Aging*, 18, 349 – 370.
- Ikkink, K. K., van Tilburg, T., & Knipscheer, K. C. P. M. (1999). Perceived instrumental support exchanges in relationships between elderly parents and their adult children: Normative and structural explanations. *Journal of Marriage and the Family*, 61, 831 – 844.
- Janevic, M. R., Janz, N. K., Dodge, J. A., Wang, Y., Lin, X., & Clark, N. M. (2004). Longitudinal effects of social support on the health and functioning of older women with heart disease. *International Aging and Human Development*, 59, 153 – 175.
- Krause, N. (2004). Lifetime trauma, emotional support, and life satisfaction among older adults. *The Gerontologist*, 44, 615 – 623.
- Laditka, J. N., & Laditka, S. B. (2000). Aging children and their older parents: The coming generation of caregiving. *Journal of Women and Aging*, 12, 189 – 204.
- Laditka, J. N., & Laditka, S. B. (2001). Adult children helping older parents: Variations in likelihood and hours by gender, race and family role. *Research on Aging*, 23, 429 – 456.
- Lee, E., Spitze, G., & Logan, J. R. (2003). Social support to parents-in-law: The interplay of gender

- and kin hierarchies. *Journal of Marriage and Family*, 65, 396 – 403.
- Lee, G. R., Dwyer, J. W., & Coward, R. T. (1993). Gender differences in parent care: Demographic factors and same-gender preferences. *Journal of Gerontology: Social Sciences*, 48, S9 – S16.
- Long, J. S. (1997). *Regression models for categorical and limited dependent variables*. Thousand Oaks, CA: Sage.
- Long, J. S., & Freese, J. (2001). *Regression models for categorical dependent variables using STATA*. College Station, TX: Stata Press.
- Lundberg, S., & Pollack, R. A. (1996). Bargaining and distribution in marriage. *The Journal of Economic Perspectives*, 10, 139 – 158.
- Matthews, S. H., & Heidorn, J. (1998). Meeting filial responsibilities in brothers-only sibling groups. *Journal of Gerontology: Social Sciences*, 53B, S278 – S286.
- Matthews, S. H., & Rosner, T. T. (1988). Shared filial responsibility: The family as the primary caregiver. *Journal of Marriage and the Family*, 50, 185 – 195.
- Pavalko, E. K., & Woodbury, S. (2000). Social roles as process: Caregiving careers and women's health. *Journal of Health and Social Behavior*, 41, 91 – 105.
- Sarkisian, N., & Gerstel, N. (2004). Explaining the gender gap in help to parents: The importance of employment. *Journal of Marriage and Family*, 66, 431 – 451.
- Schafer, J. L., & Graham, J. W. (2002). Missing data: Our view of the state of the art. *Psychological Methods*, 7, 147 – 177.
- Shuey, K., & Hardy, M. A. (2003). Assistance to aging parents and parents-in-law: Does lineage affect family allocation decisions? *Journal of Marriage and Family*, 65, 418 – 431.
- StataCorp. (2005). *Stata Statistical Software: Release 9*. College Station, TX: StataCorp LP.
- Wethington, E., Moen, P., Glasgow, N., & Pillemer, K. (2000). Multiple roles, social integration, and health. In K. Pillemer, P. Moen, E. Wethington, & N. Glasgow (Eds.), *Social integration in the second half of life* (pp. 48 – 71). London: The Johns Hopkins University Press.
- Zhan, H. J. (2008). Aging, health care, and elder care: Perpetuation of gender inequalities in China. *Health Care for Women International*, 26, 693 – 712.
- Zhan, H. J., & Montgomery, R. J. V. (2003). Gender and elder care in China: The influence of filial piety and structural constraints. *Gender and Society*, 17, 209 – 229.
- Zissimopoulos, J. (2001). *Resource transfers to the elderly: Do adult children substitute financial transfers for time transfers?* RAND Working Paper Series 01 – 05.

APPENDIX

Table A1. Evidence Supporting Choice of Zero-Inflated Models for Time and Money Dependent Variables^a

	Unpaid Assistance		Emotional Support		Financial Assistance	
	Parents	In-Laws	Parents	In-Laws	Parents	In-Laws
Median	0	0	1	0	0	0
% with zero value	67%	77%	43%	61%	89%	92%
LR test of $\alpha = 0^b$	Significant	Significant	Significant	Significant	Significant	Significant
LR test comparing ZIP to ZINB ^c	Significant	Significant	Significant	Significant	Significant	Significant
Vuong test ^d	$z = 11.46$ ($p = .000$)	$z = 4.54$ ($p = .000$)	$z = 13.22$ ($p = .000$)	$z = 6.41$ ($p = .000$)	$z = 8.91$ ($p = .000$)	$z = 8.36$ ($p = .000$)

Source: 1995 MIDUS married/cohabiting respondents ($n = 2,085$).

^aValues for time-based variables range from 0 to 720 hours/month; financial assistance variables range from \$0 to \$1,000/month. ^bThe Negative Binomial model (NBRM) reduces to a Poisson model (PRM) when $\alpha = 0$. A significant result favors selection of the NBRM. ^cThere are two specifications of zero-inflated count models to test (ZIP vs. ZINB). A significant result favors selection of the ZINB specification. ^dThe Vuong statistical test allows for a comparison of fit of the NBRM and ZINB models. A significant result favors the ZINB. Thus, although an initial test favored the NBRM over the PRM, additional information leads to selection of the ZINB in all cases.