

# Caregiving and Volunteering: Are Private and Public Helping Behaviors Linked?

Jeffrey A. Burr,<sup>1</sup> Namkee G. Choi,<sup>2</sup> Jan E. Mutchler,<sup>1</sup> and Francis G. Caro<sup>1</sup>

<sup>1</sup>Department of Gerontology and Gerontology Institute, University of Massachusetts, Boston.

<sup>2</sup>School of Social Work, University of Texas at Austin.

**Objectives.** The purpose of this study was to examine the relationship between two forms of helping behavior among older adults—informal caregiving and formal volunteer activity.

**Methods.** To evaluate our hypotheses, we employed Tobit regression models to analyze panel data from the first two waves of the Americans' Changing Lives survey.

**Results.** We found that older adult caregivers were more likely to be volunteers than noncaregivers. Caregivers who provided a relatively high number of caregiving hours annually reported a greater number of volunteer hours than did noncaregivers. Caregivers who provided care to nonrelatives were more likely than noncaregivers to be a volunteer and to volunteer more hours. Finally, caregivers were more likely than noncaregivers to be asked to volunteer.

**Discussion.** Our results provide support for the hypothesis that caregivers are embedded in networks that provide them with more opportunities for volunteering. Additional research on the motivations for volunteering and greater attention to the context and hierarchy of caregiving and volunteering are needed.

RESEARCHERS who study social and productive activities among older adults increasingly focus on the ways in which the myriad forms of these activities are related to one another (e.g., Moen, Robison, & Fields 1994). A common question addressed among these studies is whether different forms of productive activity are complementary or whether participation in one activity impedes participation in another activity (e.g., Gallagher 1994). To our knowledge, no study has investigated the association between informal caregiving and formal volunteering—two types of helping behavior taking place in different social contexts. However, a few studies have examined the relationship between care work and other forms of social activity; this research literature provides important clues guiding our study.

Formal volunteering, a type of structured helping behavior typically undertaken in public settings, is a discretionary activity for most persons. We defined formal volunteering as activity involving a person's time and effort that is not compensated by regular payment or monetary reward, but is freely undertaken and produces goods and services for organizations, and by extension, for other individuals (Wilson & Musick, 1997). We focused on volunteer work or service (a social activity) as compared to voluntary group membership (a social status; see Wilson, 2000). Among older adults, engagement in volunteer activities in formal settings constitutes an important forum for their productive contribution to their communities and the larger society.

Providing care informally to persons in one's social network is often considered an obligatory activity, especially when the care recipient is a family member. This type of helping behavior is less structured than volunteering and is undertaken in private as opposed to public venues. Caregiving is not as common an activity as volunteering, in that at any given time a relatively small proportion of the population is arranging for or providing care to persons who have a debilitating physical or

mental health condition. However, when a person assumes a caregiver role, the commitment of time may be substantial. In some cases (e.g., caring for a spouse with Alzheimer's disease), caregiving represents an all-encompassing activity that makes it difficult to engage in other productive or social activities. Other forms of caregiving are likely to be not so intensive or time consuming (e.g., intermittently providing care for distant relatives or nonrelatives) and, therefore, may allow for engagement in additional productive, social, leisure, and self-improvement pursuits.

The purpose of this study was to determine whether informal caregiving among older adults is related to formal volunteer service. Caregivers may be more likely to volunteer and show a stronger commitment to volunteer activities as an extension of their caregiving routines, in part because this activity brings them into increased contact with social networks and organizations that provide information about and opportunities for volunteering. We employed data from the 1986 and 1989 Americans' Changing Lives survey to examine these issues.

It may also be argued that volunteers are more likely to be caregivers. We suspect that if such a relationship exists, it may be more likely that volunteering puts people into contact with others who are aware of ill or disabled persons who need care. This would be most likely to lead to caregiving opportunities for nonrelatives, because a potential caregiver is likely to be aware of relatives needing care. In fact, Wilson and Musick (1997) found that volunteering predicted informal helping behavior (e.g., helping friends or neighbors with running errands, transportation, etc.) but not the reverse (see also Gallagher, 1994). However, in this article, we assumed that the often obligatory nature of caregiving was more likely to bring caregivers into contact with organizations that need volunteers than is the case for discretionary volunteering. Thus, we developed below a framework proposing that caregiving creates opportunities and motives for volunteering.

## LITERATURE REVIEW

While researchers have apparently not examined the association between caregiving roles (an often obligatory activity) and volunteer roles (a discretionary activity), there is a small body of research that considers care work as it relates to the caregivers' capacity to participate in voluntary associations and other social pursuits. The findings from these studies are equivocal due in part to the employment of idiosyncratic samples, use of alternative measures of caregiving and social activity, and variability in the age groups examined. These studies are nevertheless informative for establishing the hypotheses for our investigation of caregiving and volunteering.

Some research suggests that caregiving impedes the ability to engage in productive and social activity. Skaff and Pearlin (1992) argued that caregiving for persons with Alzheimer's disease may become so overwhelming as to result in a "loss of self" and thus fewer social roles are accepted and social activity is limited. Other research supports this finding by showing that older caregivers participated in fewer social activities (George & Gwyther, 1986), and caregivers who reported high demands related to their care work also perceived themselves to be involved in fewer social activities (Miller & Montgomery, 1990).

Another stream of research shows that it is informative to consider the type of caregiving and the time committed to caregiving when considering the effects on social activity and belonging to voluntary associations. This research indicates that some characteristics of caregiving actually lead to increased levels of social activity and organizational membership. Using data from the National Survey of Families and Households, Hoyert and Seltzer (1992) analyzed the social activities of adult female caregivers who care for spouses, children or parents. In general, they found that caregivers participated in more organizations than noncaregivers, suggesting that participation in these activities may provide temporary relief from their caregiving responsibilities and burden. They found that female caregivers who care for spouses participate in the fewest social activities and organizations when compared to women caring for nonspouse relatives and others. Women providing care for children engaged in more activities than noncaregivers, and women providing care for parents engaged in fewer social activities. They also showed that the longer that their sample of women were involved in care work, the more likely they were to experience negative outcomes.

Farkas and Himes (1997) employed cross-sectional data from the 1987 National Survey of Families and Households to examine whether middle-aged and older women's caregiving roles and employment status positively or negatively impacted a wide range of voluntary social activities. Focusing on family-centered activities, association with formal groups, and casual activity, they found that caregiving does not reduce participation in family activity or formal groups, and at least for middle-aged women, caregiving was predictive of greater casual activity (e.g., recreation, time spent with friends). They also found evidence that older women who engaged in paid work and provided care were less likely to engage in family and formal activities, indicating that both roles combined have a dampening effect on these types of activities. Examining caregiver-recipient models, they found that middle-aged women caring for parents were more likely to engage in family and formal activities.

## *Toward an Explanation for the Link Between Caregiving and Volunteering*

How might care work be linked to volunteer activity and under what circumstances? According to Wilson (2000), there are two broad approaches employed to explain why people volunteer. One approach is based on social psychological reasoning that attempts to identify how motives, values, and belief systems "inspire volunteering" (p. 218). Early socialization, educational experiences, and family background characteristics influence underlying impulses to help others in the public sphere (Wuthnow, 1995). This is sometimes referred to as cultural capital. The second approach is a behaviorist perspective, focusing on a cost-benefit or rational choice framework. Social resources such as social network characteristics and family relations, sometimes referred to as social capital (Wilson & Musick, 1997), represent another set of characteristics increasing the opportunities for and likelihood of volunteering. Also important to this set of arguments are the influences of employment characteristics, levels and types of education, and income, sometimes referred to as human capital.

The caregiving role as related to volunteering encompasses features of each broad theoretical approach. Caregiving provides caregivers with unique motivations and opportunities to volunteer in their communities in ways not commonly encountered by noncaregivers. Caregivers typically do not carry out their helping roles in isolation. Assistance is received from organizations, sometimes at low or no cost to the caregiver, which makes the task of providing care to ill or disabled persons residing in the community easier and more feasible. Receiving this assistance likely produces a sense of gratitude among caregivers, who in turn may feel motivated to repay this debt, in part, through the act of volunteering, if not directly to the organizations providing help, then in a more generalized sense to other helping organizations (Wuthnow, 1998).

Further, caregivers are often embedded in social networks that include other caregivers. Studies show that many primary caregivers have secondary or tertiary helpers—such as adult children, other relatives, friends, and neighbors—who provide financial, instrumental, and/or emotional assistance both to the person receiving care and to the caregiver (Mui, Choi, & Monk, 1998). These helpers form a complex social network that may provide additional information about volunteer opportunities with formal organizations. The social networks of caregivers link them to other persons who may be volunteers, to information about volunteer programs, and to organizations that seek volunteers (Wuthnow, 1995). Because the service organizations that caregivers rely on to assist in the care of an ill or disabled person are often underfunded, understaffed, or both, these organizations seek out volunteers to help them fulfill their missions. Caregivers interact with organizations that often have the most need, and thus they are more likely to be asked to volunteer (Wilson, 2000).

We have provided some examples to demonstrate how these two factors—opportunity and motivation—link caregivers to volunteering. Someone who cares for an elderly parent may interact with formal support organizations such as a senior center or an adult day care center. The relationship between the caregiver and these organizations puts the caregiver in proximity to knowledge about the need for volunteers in these

units. Aging services administrators may reach out directly to the caregiver asking him or her to participate in directing center activities or supervising outings for seniors. Caregivers often have valued skills that are developed or enhanced through the caregiving role that are important to volunteer organizations. When caring for elderly parents, caregivers develop communication skills and knowledge about the unique needs of older adults, especially those with functional status deficits.

Similarly, caregivers who provide care for a seriously ill or disabled person often provide help to the person through interactions with health care service providers (e.g., health clinics, hospitals) by making appointments, providing transportation, interpreting instructions, and helping with prescribed therapies. In the act of interfacing with these organizations on behalf of the care recipient, the informal caregiver learns about these organizations and about opportunities to volunteer. After the connection between the care recipient and health care service provider is finished, or perhaps before, the caregiver may feel a sense of gratitude toward the organization and volunteer her or his time to pay back the help received.

Finally, a person caring for a relative or friend who may be chronically ill (e.g., HIV/AIDS patients, Alzheimer's patients) may volunteer in the political arena. In providing such care, it is likely that the caregiver comes into contact with other persons who also provide care for someone with similar illnesses, either in a clinical or hospital setting, hospice, or by belonging to a support group. By virtue of contact with other caregivers, combined with a desire to improve the conditions of other persons with similar serious afflictions, the caregiver may become politically active by doing volunteer work for a political organization, advocacy group, or political candidate. A caregiver may volunteer to work for a candidate running for political office with a platform containing a progressive stance on AIDS research or a policy supporting increased government support for long-term care for persons with Alzheimer's disease. These settings where informal and formal care interface provide sources of information about ways to become politically active as well as social support for such activity, making it more likely that the current or former caregiver will become an advocate for change. In sum, we expected caregivers to be more likely than noncaregivers to volunteer on the basis of their caregiver role and the social networks in which they are embedded.

Another dimension influencing the complex link between caregiving and volunteering concerns characteristics of the caregiver activity. Two dimensions of caregiving considered in this study include the time committed to caregiving and the nature of the relationship between the caregiver and care recipient. Some types of caregiving, such as caring for a person with an advanced stage of dementia, require a constant vigil, implying an extraordinary time commitment, taking both a physical and an emotional toll on the caregiver (e.g., Zarit, Todd, & Zarit, 1986; however, see Van Willigen, 2000). Persons who give a substantial amount of their time to the caregiver role likely must reduce their commitments to other roles, including volunteering. Thus we expected that persons providing a low or modest level of care in terms of hours committed would be more likely to volunteer than persons providing no care (as noted above) and persons providing a high amount of care (a curvilinear effect).

Finally, we expected the type of relationship of the caregiver to the care recipient to impact volunteering behavior. Some caregivers do not feel they have a choice with respect to their caregiving responsibilities when the potential care recipient is a close relative (e.g., a spouse) for reasons of both affection and norms of social obligation (Gerstel & Gallagher, 1993). Thus, although the literature on spousal caregiving and social activity is somewhat sparse, we expected that providing care to a spouse would either have no relationship to volunteering or at least reduce the likelihood that a person engages in volunteer activity and reduce the time commitment to such activity. This expectation is supported by the fact that caring for a spouse tends to occur in one's own home (among persons who are 50 years old and older in the Americans' Changing Lives survey, more than 90% of spousal caregiving is provided in the respondent's home). Caring for someone in one's home may limit the number of social network contacts often necessary for locating volunteer activities.

Research literature reporting on the relationship between participation in other activities and caregiving for children and parents is equivocal. Nevertheless, following research by Farkas and Himes (1997), we expected that caring for a parent or a child would result in more volunteering, given that there are numerous organizations and support groups whose mission is to provide formal help to older persons and children and that caregivers are likely to come into contact with these organizations. Finally, persons providing care to more distant relatives and nonrelatives (e.g., friends and neighbors) likely have a greater sense of discretion in these activities and more flexible schedules. Caregiving provided to distant relatives and nonrelatives provides many of the same opportunities for volunteering but fewer of the barriers related to the often intense emotional and time commitment provided to close relatives. Comparing each of the five types of care recipients, we expected that those caring for persons where social obligation and emotional intensity are likely to be weaker (e.g., other relatives and nonrelatives) would have a stronger attachment to the volunteer labor force.

## METHODS

*Data.*—In this study, we used data taken from the Americans' Changing Lives survey (ACL; see House, 1995). The ACL is a complex panel survey with a multistage area probability sample design. We used the first two waves of the survey. The baseline survey obtained information from 3,617 respondents aged 25 and older in 1986. Blacks and individuals older than age 60 were oversampled. The second wave of the ACL survey, taken in 1989, contains reinterviews with 2,817 of the original respondents. Our research used two waves of these data so that the temporally causal relationships among our measures of caregiving and volunteer activities would be effectively gauged. The study sample was based on middle-aged and older respondents aged 50 and older in 1986. The study sample was restricted to those participating in both the 1986 (T1) and 1989 (T2) interviews ( $N = 1,615$ ). All analyses were based on weighted data, using the T2 person weight provided in the ACL.

Missing values were addressed through imputation. There were 16 missing cases on the attitudes about helping others question that were assigned the modal category of strongly agree. For family income, there were 158 missing cases (9.8%), and values were imputed by the ACL survey staff using information on mean education, marital status, home ownership, and occupation.

As with most panel surveys based on a probability sample design, selection bias due to attrition across the two waves of the ACL may negatively impact generalizability. To account for this possibility, we employed a two-stage sample selection estimation technique following Heckman (1979). We predicted inclusion in the study sample with a regression model that included the interviewer's perception of the respondent's level of cooperation at T1 (instrumental variable), age, number of health conditions, and sex. This strategy yielded an estimate of the likelihood ( $\lambda$ ) of inclusion in both waves of the survey. We subsequently included a lambda term in all of the multivariate regression analyses reported in this study. In addition, we adjusted the standard errors of the coefficients of the regression models for the complex sample design of the ACL by using the interval regression (INTREG) procedure found in STATA 8.1 (StataCorp, 2003; see below). Without this adjustment, there was a chance that the standard errors would be biased downward, yielding misleading inferences about relationships among affected variables.

*Measurement.*—Respondents to the ACL survey were asked, “During the last 12 months, did anyone ask you to volunteer your time?” (yes or no). Respondents who indicated they participated in one or more activities were also asked, “Altogether, about how many hours did you spend on volunteer work of (this kind/these kinds) during the last 12 months?” We provided the amount of time spent volunteering across all types of organizations reported in the survey in the previous year at the median of the five original categories (see Table 1) as 0 hr (for those who reported no volunteering in the previous 12 months), 10 hr, 30 hr, 60 hr, 120 hr, and 200+ hr (the ACL does not report time commitment for specific types of activity). Our dependent variable was the number of hours committed to volunteering observed at T2.

The key independent variables captured several dimensions of caregiving behavior; unless otherwise noted, we took all independent variables from T1. The ACL survey asked the following question: “Now I would like to talk with you about friends and relatives who have trouble taking care of themselves because of physical or mental illness, disability, or for some other reason. Are you currently involved in helping someone like this by caring for them directly or arranging for their care?” The survey also asked respondents about their relationship to the person they provide the most care to and the number of hours of care provided during the last 12 months (reported in the ACL as categories of 0, 10, 30, 60, 120 or 200+ hr; these represent the midpoints of the original survey categories).

We defined caregiving status by a dichotomous variable: 1 = caregiver, 0 = not a caregiver. We measured intensity of caregiving in time committed during the previous 12 months. We created three dichotomous variables to measure time committed to caregiving, where 10 to 30 hr equaled low commitment, 60 to 120 hr equaled moderate commitment, and 200+ hr equaled

high commitment (reference group is 0 hr). In Table 1, we reported the weighted means of the midpoints of the volunteering and caregiving hours variables in Panel A and the frequency distribution of the categories of hours committed to these activities in Panel B. We measured caregiver's relationship to the care recipient with five dichotomous variables: cares for spouse, cares for a child, cares for a parent, cares for another relative, and cares for a nonrelative (the reference group was respondents who reported no caregiving). The survey question referred to the person to whom the caregiver provides the most help.

Human capital concepts were represented by indicators that include education, measured by number of years of formal education completed (range = 0–18+), and health, measured with a cumulative index that summed four indicators of limitations with activities of daily living (ADLs; range = 0–4). The ADL indicators included whether the respondent has difficulty bathing, difficulty climbing a few flights of stairs, difficulty walking several blocks, or difficulty doing heavy housework such as washing walls or shoveling snow. If the respondent indicated that they had some difficulty, a lot of difficulty, or they could not do the activity at all, the respondent was considered to have a limitation with this activity. We created three dummy variables for limitations with ADLs across the two waves: number of limitations with ADLs increased, number of limitations with ADLs decreased, and number of limitations remained the same (reference group).

Social capital (social network) was represented by two measures. The first is an index of informal social activity, combining responses from two questions relating to how often the respondent talks with friends and neighbors and how often she or he visits with friends and neighbors (range = 0–10). The response options were never, less than once a week, about once a week, two or three times a week, once a day, and more than once a day. The second measure was informal social network size, based on a question asking respondents to give the number of persons he or she could call on for help (“About how many friends or relatives do you have whom you could call on for advice or help if you needed it?”). The measure ranged from 0 to 40 (top-coded at 40 to account for extreme right-hand skew).

Following Wilson & Musick (1997), we measured helping values (cultural capital) by the respondent's level of agreement (strongly agree to strongly disagree) to the following statement: “Life is not worth living if one cannot contribute to the well-being of other people.” The scores ranged from 1 to 4, where a higher score indicated a higher level of agreement with this social value.

Demographic variables included gender (1 = female; 0 = male), race (1 = white, 0 = other), marital status (1 = married, 0 = other), age in years (range = 50–96), and age squared (to capture the possible curvilinear impact of life cycle stage on volunteer activity). We measured paid work activity by the number of hours of work reported in the 12 months prior to the interview (logged). We measured income by self-reports of family income in the 12 months prior to the interview (given in 10 categories).

*Analytic Strategy.*—Our dependent variable, hours of volunteering in the past year at T2, was truncated in that more than 50% of the sample reported no volunteer hours.

Table 1. Descriptive Characteristics of Sample and Bivariate Analysis (Frequencies or Means and Standard Deviations)

Variables	Full Sample (1)	Volunteer (T2) (2)	Not a Volunteer (T2) (3)	Statistical Significance (4)	Volunteers Only	Caregivers Only
Panel A						
Volunteer (T2: 1 = yes)	38.4%					
Volunteer hours (T2)	31.7 (61.0)					
Caregiver (T1: 1 = yes)	21.3%	25.8%	18.5%	.001		
Caregiver hours (T2)	23.7 (58.1)	29.3 (63.3)	20.2 (54.4)	.002		
Relationship to caregiver						
Spouse	2.3%	1.3%	2.9%	.039		
Child	1.8	1.0	2.2	.077		
Parent or in-law	9.6	12.6	7.8	.002		
Other relative	3.8	4.8	3.2	.110		
Non-Relative	3.7	6.0	2.4	.000		
Age (years)	64.3 (9.2)	63.3 (8.4)	64.9 (.7)	.001		
Sex (1 = female)	56.7%	57.7%	56.1%	.536		
Race (1 = White)	87.2%	90.6%	85.1%	.001		
Marital status (1 = married)	66.8%	72.7%	63.1%	.000		
Employment (hours)	766 (1,097)	763 (1,027)	767 (1,138)	.936		
Family income (\$25,000+ annually)	36.9%	43.5%	32.8%	.000		
Education (years)	11.2 (3.4)	12.1 (3.3)	10.6 (3.3)	.000		
No change in ADL limitations (T1 – T2)	58.6%	61.6%	56.7%	.055		
ADL limitations increase (T1 – T2)	29.6	25.3	32.3	.003		
ADL limitations decrease (T1 – T2)	11.8	13.1	11.0	.205		
Informal network activity index	6.9 (2.3)	7.4 (2.0)	6.6 (2.5)	.000		
Social network size	8.7 (8.5)	10.2 (9.2)	7.9 (7.8)	.000		
Helping values	3.6 (.8)	3.7 (.8)	3.5 (.7)	.000		
No. of cases (unweighted)	1,615	601	1,014			
Panel B						
Volunteer hours (T2)						
1–19					25.1%	
20–39					21.4%	
40–79					15.9%	
80–159					13.7%	
160+					23.8%	
No. of cases					601	
Caregiver hours						
1–19						16.6%
20–39						14.1%
40–79						15.1%
80–159						15.2%
160+						39.0%
No. of cases						320

Notes: Statistics were based on weighted data. Significance levels were estimated by chi-square for categorical measures and t-test for continuous measures.

Ordinary least squares regression techniques were not employed because this technique may yield biased results when employed with censored data. The bias may occur because two substantively interesting features of volunteer behavior were captured in the dependent variable volunteer hours: (1) the decision to volunteer, and (2) for those who choose to volunteer, how much to volunteer. We did not assume that the factors that predicted one part of the decision process impacted the other part in the same way. Thus, we employed Tobit regression techniques to estimate our models because this approach takes into consideration the truncated nature of our dependent variable (Maddala, 1983). We used STATA 8.1 (StataCorp, 2003) to estimate our models. Because the Tobit regression routine does not allow for the use of weights or to adjust the standard errors to account for clustering of cases in the sample design, we used the INTREG procedure with the robust error estimation and cluster options (Hardin, 2001). We

modified the interval regression method to replicate the Tobit regression model, yielding coefficients based on weighted data with standard errors adjusted for the complex sample design.

Tobit regression modeling techniques generate a single coefficient predicting the underlying behavior of whether to volunteer and how much time to commit to volunteering. This coefficient did not provide a direct interpretation of the two processes. Therefore, following a strategy proposed by Roncek (1992), we decomposed the estimated coefficient into a part that indicated the probability of volunteering and a part that indicated the effect of the independent variables on the number of hours of volunteering (see also Musick, Wilson, & Bynum, 2000). We reported both the original Tobit regression coefficients and the decomposition of the coefficient into its two constituent parts.

We estimated two types of models to evaluate the effect of each dimension of caregiving on whether a person is a volunteer and the number of hours volunteered. We estimated the total

Table 2. Results for Volunteer Hours Regressed (Tobit) on Caregiver Status and Control Variables

Variable	Model 1			Model 2		
	$\beta$	Probability	Hours	$\beta$	Probability	Hours
Caregiver status (1 = yes)	35.198*** (10.947)	.109	9.33	20.204 <sup>†</sup> (10.810)	.066	5.35
Age				12.774 <sup>†</sup> (6.961)	.042	3.39
Age <sup>2</sup>				-.090 <sup>†</sup> (.052)	.000	0.24
Female				-15.352 (10.719)	.051	4.07
White				3.349 (10.160)	.011	0.99
Married				4.665 (10.283)	.015	1.24
Employment hours (ln)				-1.031 (1.039)	.003	0.27
Education				7.110*** (1.684)	.023	1.88
Family income				3.820 <sup>†</sup> (2.267)	.013	1.01
Helping values				25.759*** (6.441)	.085	6.83
ADL limits worsened				-.770 (9.160)	.003	0.20
ADL limits improved				16.544 (10.377)	.055	4.38
Informal activity				8.672*** (1.988)	.029	2.30
Network size				1.628** (.610)	.005	0.43
$\lambda$	221.635*** (62.228)			182.523* (85.350)		
Intercept	-225.699			-893.290		
Model $\chi^2$	28.18			241.86		

Notes: ADL = activity of daily living.  $N = 1,615$ . Unstandardized coefficients ( $\beta$ ) and standard errors are presented with decomposition of effect into probability of volunteering and differences in hours volunteering.

\* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$ ; <sup>†</sup>.10  $\geq p \geq .05$ , two-tailed test.

(unadjusted) effect of caregiving on volunteering by regressing volunteer hours on three dimensions of caregiving without controls. Next, for each dimension of caregiving, we estimated models that included our full set of control variables, providing estimates of the net (adjusted) effects.

## RESULTS

Table 1 provides descriptive statistics for the study sample. Among those respondents in the ACL survey aged 50 and older at first interview, 38.4% reported volunteering for a religious or secular organization in the 12 months prior to the second interview. Approximately one fifth of the sample (21.3%) reported providing care or arranging for care for someone with a disability or illness at first interview. Table 1 also provides a breakdown for measures of caregiving, resources, and other personal characteristics at T1 according to whether the respondent was a volunteer at T2. These results show that a larger fraction of volunteers compared to nonvolunteers provided care to others (25.8% and 18.5%, respectively;  $p = .001$ ). Further, older adults who volunteer provided more caregiving hours than those who did not volunteer (means of categorical midpoints, 29.3 and 20.2 hr, respectively;  $p = .002$ ). Readers may wish to inspect the table for a more detailed understanding of the sample characteristics.

Next, we have reported the results of a series of multivariate Tobit regression models for each of the three dimensions of caregiving. For each analysis, we reported the unstandardized Tobit regression coefficients (and standard errors) along with a decomposition of the coefficients that includes an estimate of the probability of being a volunteer along with an estimate of the number of hours of volunteering for those who were volunteers. In Table 2, the number of volunteer hours reported at T2 was regressed on caregiver status at T1. The unadjusted (or total) effect shows that caregivers volunteered more hours than noncaregivers (see Model 1). Based on the decomposition of the unstandardized Tobit coefficient, we can see that the

probability of being a volunteer was 10.9% higher for caregivers than noncaregivers, and caregivers reported 9.33 more hours of volunteering annually than did noncaregivers.

In Model 2, we reported the results of the full model (adjusted or net effects). The effect of caregiver status on volunteering remained marginally statistically significant, with a 43% reduction in the unstandardized Tobit regression coefficient. Net of the control variables in the model, caregivers were 6.6% more likely to be volunteers than were non-caregivers, and caregivers contributed 5.4 more hours of volunteering annually than did noncaregivers. As with previous research (see Wilson & Musick, 1997), we also found that higher levels of human capital (education, income), social capital (informal network activities and size), and cultural capital (helping values) also predicted higher levels of commitment to volunteering among middle-aged and older adults. In general, the results presented in Table 2 supported our expectation that caregivers would be more likely than non-caregivers to be volunteers and volunteer more hours.

In Table 3 we have reported the results of the number of hours of volunteer activity regressed on the number of hours of caregiving. Contrary to our expectations, persons with modest levels of caregiving time commitment were not more likely than noncaregivers to be volunteers. Rather, middle-aged and older adults who reported 200 or more hours of caregiving (the highest amount of caregiving hours reported) were more likely than persons reporting no caregiving hours to be volunteers and volunteer more hours. We have presented the unadjusted effects in Model 1, whereby persons reporting 200 or more hours of caregiving were 12.3% more likely to be volunteers as compared to noncaregivers, and these high-commitment caregivers volunteer 10.5 more hours per year than noncaregivers. We have presented the adjusted effects in Model 2. Although the strength of the effect of caregiving hours on volunteer hours was reduced in size, the same pattern found in Model 1 emerged. Persons reporting a higher commitment to caregiving were more likely to be volunteers and reported more annual

Table 3. Results for Volunteer Hours Regressed (Tobit) Caregiving Hours and Control Variables

Variable	Model 1			Model 2		
	$\beta$	Probability	Hours	$\beta$	Probability	Hours
Care hours						
1-39	41.159 (25.846)	.128	10.91	26.334 (23.422)	.086	6.98
40-159	23.220 (17.449)	.072	6.15	5.156 (17.863)	.017	1.37
160+	39.612** (11.445)	.123	10.50	26.586* (11.415)	.088	7.05
Age				12.719 <sup>†</sup> (6.976)	.042	3.37
Age <sup>2</sup>				-.089 <sup>†</sup> (.052)	.000	0.02
Female				-15.587 (10.320)	.051	4.13
White				2.937 (10.544)	.010	0.78
Married				4.747 (10.191)	.016	1.26
Employment hours (ln)				-1.057 (1.058)	.003	0.28
Education				7.194*** (1.682)	.024	1.91
Family income				3.743 <sup>†</sup> (2.247)	.012	0.99
Helping values				25.776*** (6.419)	.085	6.83
ADL limits worsened				-.532 (8.642)	.002	.14
ADL limits improved				16.608 (10.502)	.055	4.40
Informal activity				8.665*** (1.982)	.029	2.30
Network size				1.635** (.609)	.005	.43
$\lambda$	222.882*** (61.125)			185.289* (84.008)		
Intercept	-226.631			-893.871		
Model $\chi^2$	35.67			255.88		

Notes: ADL = activity of daily living.  $N = 1,615$ . Unstandardized coefficients ( $\beta$ ) and standard errors are presented with decomposition of effect into probability of volunteering and differences in hours volunteering.

\* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$ ; <sup>†</sup>.10  $\geq p \geq .05$ , two-tailed test.

volunteer hours. The pattern of effects for the control variables was similar to those found in Table 1.

In Table 4, we reported regression results estimating the impact of caregiver's relationship to the care recipient on volunteering hours. Model 1 provides the unadjusted effects.

The direction of the relationship between volunteer hours and caring for a spouse or caring for a child was negative, but the effects were not statistically significant. The results also showed that persons caring for a parent, other (distant) relative, or nonrelative were more likely to be volunteers and volunteer

Table 4. Results for Volunteer Hours Regressed (Tobit) on Caregiver-Care Recipient Relationship and Control Variables

Variable	Model 1			Model 2		
	$\beta$	Probability	Hours	$\beta$	Probability	Hours
Care relationship						
Spouse	-40.029 (28.401)	.124	10.61	-38.273 (29.328)	.125	10.14
Child	-42.040 (42.996)	.130	11.14	-37.301 (39.224)	.123	9.88
Parent	32.470* (16.230)	.101	8.60	18.855 (15.463)	.062	5.00
Other relative	57.543* (24.485)	.178	15.24	32.729 (24.324)	.108	8.67
Nonrelative	76.845*** (22.939)	.238	20.36	54.573** (19.693)	.180	14.46
Age				12.727 <sup>†</sup> (6.792)	.042	3.37
Age <sup>2</sup>				-.088 <sup>†</sup> (.051)	.000	.02
Female				-12.596 (10.600)	.042	3.34
White				2.597 (10.539)	.009	.69
Married				7.897 (10.515)	.026	2.09
Employment hours (ln)				-.936 (1.020)	.003	.25
Education				6.925*** (1.667)	.022	1.84
Family income				3.680 (2.293)	.012	.98
Helping values				25.681*** (6.316)	.085	6.81
ADL limits worsened				-.948 (9.198)	.003	.25
ADL limits improved				13.937 (10.058)	.046	3.69
Informal activity				8.006*** (1.916)	.026	2.12
Network size				1.562** (.600)	.005	.41
$\lambda$	223.538*** (61.862)			195.003* (85.383)		
Intercept	-226.307			-901.928		
Model $\chi^2$	53.25			323.26		

Notes: ADL = activity of daily living.  $N = 1,615$ . Unstandardized coefficients ( $\beta$ ) and standard errors are presented with decomposition of effect into probability of volunteering and differences in hours volunteering.

\* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$ ; <sup>†</sup>.10  $\geq p \geq .05$ , two-tailed test.

Table 5. Results for Asked to Volunteer Regressed (Logistic) on Caregiving Dimensions and Control Variables (Unstandardized Coefficients and Standard Errors)

Variable	Model 1	Model 2	Model 3
Caregiver status (1 = yes)	.336* (.160)		
Care hours			
10–30		–.190 (.287)	
60–120		.636** (.237)	
200+		.518* (.197)	
Care relationship			
Spouse			.330 (.393)
Child			–.107 (.556)
Parent			.466† (.244)
Other relative			.364 (.268)
Nonrelative			.157 (.412)
Intercept	–8.982	–8.671	–8.717

Notes:  $N = 1,615$ . All models include controls for age, age squared, female, white, marital status, employment hours, income, help values, ADL limitations, informal social activity, social network size, and lambda. \* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$ ; †.10  $\geq p \geq .05$ , two-tailed test.

more hours than noncaregivers. Caring for a nonrelative showed the strongest effect; compared to noncaregivers, persons caring for a nonrelative were 23.8% more likely to be volunteers and reported 20.4 more hours volunteering annually. We reported the net effects in Model 2. After entering the demographic and resource control variables, the caregiving effects for all but caring for a nonrelative were no longer statistically significant. Those who provided care to a nonrelative were 18% more likely to be volunteers and volunteer 14.5 more hours than those reporting no caregiving.

If our expectations about caregivers having unique information about and opportunities for volunteering were accurate, then we might have expected that caregivers were asked to volunteer more than noncaregivers. We investigated this possibility by regressing a variable describing whether persons were asked to volunteer at T2 (yes or no) on our three dimensions of caregiving and on our set of control variables (logistic regression analysis; see Table 5). The results showed support for this idea. Caregivers were more likely than noncaregivers to be asked to volunteer. In addition, persons committed to a modest or high level of caregiving in terms of annual hours reported were also more likely to be asked to volunteer than noncaregivers. Finally, persons providing care to parents were more likely to be asked to volunteer than noncaregivers. The remaining types of care recipients appeared to show no relationship with being asked to volunteer.

## DISCUSSION

Our analyses support the central thesis of this study that caregivers report more volunteer activity than noncaregivers; we found in our regression analyses that caregivers are more likely to be volunteers than noncaregivers, and they report more hours of volunteering. We also found that those who are most committed to caregiving in terms of hours of care work reported are more likely to be volunteers and report more hours of volunteering. We expected, but did not find, a curvilinear effect, where those providing a modest amount of care would be most likely to be volunteers. It may be that the ACL variable for

caregiving hours, truncated at 200 or more hours, is not sensitive enough to capture such an effect. In other words, if a continuous measure of caregiving were available without truncation, we may have calibrated our measures of low, modest, and high commitments differently. Persons reporting 200 hr of caregiving are providing, on average, about four hours of caregiving per week. This would not be considered a high amount of caregiving for persons who provide care to someone with Alzheimer's disease. More research is needed on this question.

Finally, caregivers of nonrelatives are more likely than noncaregivers to be engaged in volunteering and commit more time to volunteering. These findings are generally consistent with the results of Farkas and Himes' (1997) study of caregiving effects on social activity and formal voluntary association. We did not find that spousal caregivers were less likely to be volunteers than noncaregivers, as we had predicted. One reason may be that spousal caregivers are older than noncaregivers (in the ACL, the average age difference is 5.6 years). Given that volunteering has been shown to decrease with age (however, see Hendricks & Cutler, 2004) may explain the lack of a relationship in our analyses. We also note that we found no interaction effects among age and caregiver status and the other control variables (including ADL limitations) that might further explain volunteering behavior.

We posited that caregivers would be exposed to more opportunities for caregiving than noncaregivers and that this exposure would also result in caregivers being more likely to be asked to volunteer. Our analyses support this argument as well. A cross-tabulation of the asked to volunteer variable with the volunteer status variable among our sample respondents shows that 72.3% of those asked to volunteer in the last 12 months also reported volunteering in the last 12 months. We regressed volunteer hours on whether a person was asked to volunteer, including controls for caregiving status, along with controls for demographic and resource characteristics (results available upon request). We found that those who are asked to volunteer are more likely to volunteer than those who are not asked and that the inclusion of the asked to volunteer variables reduces the effect of caregiving variables to statistical nonsignificance. This may mean that being asked to volunteer mediates the effects of caregiver status and commitment, which is consistent with the idea that caregivers are embedded in social networks and have contact with organization personnel that ask them to volunteer. However, because the asked to volunteer question in the ACL survey was not asked at T1, we cannot be certain of the direction of the causal relationship between volunteering and being asked to volunteer. It is possible that persons who volunteer are also more likely to be asked to volunteer than nonvolunteers. A definitive analysis of this issue is beyond the scope of this study.

It is likely that opportunities for volunteering are combined with motivations for volunteering among caregivers. With the ACL data, we are not able to measure specific motivations for volunteering. We assumed that our measure of helping values is an indirect measure of motivation to volunteer, but we do not find any interaction effect between this general measure of volunteering motivation and caregiver status. It may also be that many caregivers use their social networks to get involved in volunteer activity as a means of spending time away from caregiving routines and the associated sense of burden or stress.



Some caregivers may find that volunteering provides a respite from the rigors of caregiving and perhaps provides them with a form of social support. Thus, caregivers may have self-protective motivations that include making efforts to maintain or improve their own physical and emotional health, while carrying out the challenges posed by the caregiver role. The ACL data do not allow us to investigate this issue, but if data become available, researchers should more closely investigate the motivations for volunteering among caregivers and noncaregivers.

It is also possible that in the population of older persons there may be a class of individuals who could be characterized as “super-helpers” or “doers.” That is, some persons have high commitments to helping others in both the private and public domains, and they possess the necessary resources to act on these commitments. These people likely find the time and energy to engage in both types of activity and are self-selected into these activities (Thoits & Hewitt, 2001). We are unable to measure these underlying personality characteristics with these data and believe new data need to be collected to capture important motivational characteristics and personality traits that may be associated with being a super-helper. Theoretical concepts that may help identify this class of super-helpers would include, but are not limited to, emotional IQ, self-efficacy, and a wide array of specific personal motivations for helping others.

To further explore the relationship between caregiving and volunteering, we also estimated change models of volunteer activity (results available upon request). We included in our model of volunteer activity at T2 a measure of volunteer status at T1, along with the other variables reported above. Not surprisingly, volunteer status at T1 is the strongest predictor of volunteer hours at T2, evidence of the stability of volunteer behavior over time. In these change models, nearly all of the dimensions of caregiving failed to reach statistical significance. However, after controlling for volunteer status at T1 and the other control variables, we found that those who care for nonrelatives report a greater number of volunteer hours at T2 than those who are not engaged in caregiving. The fact that most of the caregiving variables do not reach statistical significance could be a substantive finding or it could be a statistical artifact related to the correlation among the T1 volunteer status variable and the other T1 predictors.

To examine this issue more closely, we created a productive activity measure at T1 with the following categories: (1) no volunteer or caregiving activity; (2) volunteer activity; (3) caregiver activity; and (4) caregiving and volunteer activity. We compared this measure of productive activity at T1 with volunteer activity at T2. An interesting hierarchy emerged. Persons who engaged in no volunteer or caregiving activity at T1 report about as much volunteer activity at T2 as those who report caregiving activity only. Those who reported volunteering at T1 reported the next highest level of volunteering at T2, and those who reported volunteering and caregiving at T1 reported the highest level of volunteering at T2. This may be further evidence to support the idea that persons engaged in multiple social networks (caregiving and volunteering networks) have the most opportunity and motivation to engage in productive activity in later life. More research is needed to determine how specific types of productive activity cluster together and to determine the impacts of such clustering.

Limitations of this study include the relative age of the ACL data. Although these are currently the best panel data available for examining the questions posed here, it is possible that more recent cohorts of middle-aged and older adults exhibit different patterns of relationships among caregiving and volunteering activities. Nevertheless, the ACL data remain valid for hypothesis testing. While the data on caregiving in the ACL are better than most other sources, it would be helpful to have more detail on types of caregiving, hours committed to specific types of caregiving, specific information on motivations for caregiving and volunteering, along with individuals' history of caregiving and volunteering.

#### ACKNOWLEDGMENTS

This research was supported by a grant from the National Institute on Aging (R03 AG18910). We thank the anonymous reviewers of our article for helpful suggestions.

Address correspondence to Dr. Jeffrey A. Burr, Department of Gerontology, McCormack Graduate School of Policy Studies, 100 Morrissey Blvd., University of Massachusetts Boston, Boston, MA 02125-3393. E-mail: jeffrey.burr@umb.edu

#### REFERENCES

- Farkas, J. I., & Himes, C. L. (1997). The influence of caregiving and employment on the voluntary activities of midlife and older women. *Journal of Gerontology: Social Sciences, 52B*, S180–S189.
- Gallagher, S. (1994). *Older people giving care: Helping family and community*. Westport, CT: Auburn House.
- George, L., & Gwyther, L. (1986). Caregiver well-being: A multidimensional examination of family caregivers of demented adults. *The Gerontologist, 26*, 253–259.
- Gerstel, N., & Gallagher, S. (1993). Kinkeeping and distress: Gender, recipients of care and work-family conflict. *Journal of Marriage and the Family, 55*, 598–607.
- Hardin, J. (2001). Obtaining robust standard errors for Tobit? Retrieved December 28, 2004, from <http://stata.com/support/faqs/stat/tobit.html>
- Hendricks, J., & Cutler, S. (2004). Volunteerism and socioemotional selectivity in later life. *Journal of Gerontology: Social Sciences, 59B*, S251–S257.
- Heckman, J. (1979). Sample selection bias as a specification error. *Econometrica, 45*, 153–161.
- House, J. (1995). *Americans' Changing Lives: Waves I and II, 1986 and 1989*. Ann Arbor, MI: ICPSR.
- Hoyert, D., & Seltzer, M. (1992). Factors related to the well-being and life activities of family caregivers. *Family Relations, 41*, 74–81.
- Moen, P., Robison, J., & Fields, V. (1994). Women's work and caregiving roles: A life course approach. *Journal of Gerontology: Social Sciences, 49*, S176–S186.
- Maddala, G. S. (1983). *Limited-dependent and qualitative variables in econometrics*. Cambridge: University Press.
- Miller, B., & Montgomery, A. (1990). Family caregivers and limitations in social activities. *Research on Aging, 12*, 72–93.
- Mui, A. C., Choi, N. G., & Monk, A. (1998). *Long-term care and ethnicity*. Westport, CT: Auburn.
- Musick, M., Wilson, J., & Bynum, W., Jr. (2000). Race and formal volunteering: The differential effects of class and religion. *Social Forces, 78*, 1539–1571.
- Roncek, D. (1992). Learning more from Tobit coefficients. *American Sociological Review, 57*, 503–507.
- Skaff, M., & Pearlin, L. (1992). Caregiving: Role engulfment and the loss of self. *The Gerontologist, 32*, 656–664.
- StataCorp. (2003). *Stata statistical software: Release 8.1*. College Station, TX: Author.
- Thoits, P. A., & Hewitt, L. N. (2001). Volunteer work and well-being. *Journal of Health and Social Behavior, 42*, 115–131.
- Van Willigen, M. (2000). Differential benefits of volunteering across the life course. *Journal of Gerontology: Social Sciences, 55B*, S308–S318.

- Wilson, J. (2000). Volunteering. *Annual Review of Sociology*, 26, 215–240.
- Wilson, J., & Musick, M. (1997). Who cares: Toward an integrated theory of volunteer work. *American Sociological Review*, 62, 694–713.
- Wuthnow, R. (1995). *Learning to care: Elementary kindness in an age of indifference*. New York: Oxford University Press.
- Wuthnow, R. (1998). *Loose connections: Joining together in America's fragmented communities*. Cambridge, MA: Harvard Press.
- Zarit, S. H., Todd, P. A., & Zarit, J. M. (1986). Subjective burden of husbands and wives as caregivers: A longitudinal study. *The Gerontologist*, 26, 260–266.

Received May 30, 2004

Accepted May 24, 2005

Decision Editor: Charles F. Longino, Jr., PhD