ACL Administration for Community Living

IssueBRIEF

AoA Administration on Aging

OCTOBER 2019

Factors Associated With the Impact of Caregiving on Employment Among Informal Caregivers

PURPOSE

The purpose of this analysis is to explore which caregiver characteristics and factors are associated with caregiver-reported impact of caregiving on their employment. Identifying these factors is critical to developing programs and supports to help caregivers feel secure in their jobs and stay employed longer.

KEY FINDINGS

Caregiver factors associated with *increased* likelihood of caregiving impact on employment were higher income, being the care recipient's child, higher caregiver burden, and sleep interruptions. Caregiver factors associated with *decreased* likelihood of impact were older age and the perception of receiving all the help that is needed.

AUTHORS
Katarzyna Zebrak
Joanne Campione
Duck-Hye Yang
Willow Burns

BACKGROUND

Recent data suggest that approximately 40 million informal caregivers—family members, friends, and partners—in the United States provide an estimated $470 billion worth of unpaid services to adults with limitations in daily activities.[1] These informal caregivers assist their care recipients with activities of daily living, healthcare activities, and complex medical/nursing tasks for an average of 20 hours per week.[1,2,3] An estimated 50% of informal caregivers to older adults are employed in full- or part-time positions, with the majority working at least 35 hours per week.[4] The number of working adults who engage in caregiving activities has been increasing steadily and is projected to continue rising in the coming years.[5]

According to the 2015 Retirement Confidence Survey, 61% of informal caregivers have experienced one or more impacts of caregiving on their employment, the top three of which include going in late, leaving early, or taking time off (49%); taking a leave of absence (15%); and reducing work hours/taking a less demanding job (14%).[6] Another survey found that approximately 22% of retirees left employment earlier than planned to care for a spouse or another family member.[7]

Not surprisingly, both employees and employers can be affected by the impact of informal caregiving on employment. Whereas for the caregivers, such consequences include reduction in or loss of income, job insecurity, and limited upward mobility, employers may experience substantial financial losses due to absenteeism and employee replacement, as well as decreases in employee productivity.[1,4,5] Despite these issues, employees caring for adult family members report fewer benefits and less flexibility in the workplace compared to employees caring for children.[4,5,6]

DATA SOURCE

Survey data used in this analysis were collected as part of the outcome evaluation of the National Family Caregiver Support Program (NFCSP), a Federal program designed to support the needs of informal caregivers caring for family members.[8] The program is overseen by the Administration for Community Living. Data for the evaluation were collected from a random sample of NFCSP client caregivers of older adults (obtained from 316 Area on Agencies on Aging [AAA] client lists), and a comparison group of caregivers (identified through the National Survey of Older Americans Acts Participants [NSOAAP]). In December 2016, 1,568 caregivers were interviewed as participants in the evaluation. Details of the evaluation, including study design, sampling, data collection, data analyses, and evaluation results are presented in a publically available report.[9] From the evaluation's sample of caregivers, this analysis used data from a subset of recently employed caregivers who reported working for pay full or part-time within the past year, and who responded to one or more items about the impact of caregiving on their employment (n=535).

MEASURES

The dependent or outcome variable for this analysis is a binary variable indicating whether the caregiver experienced an impact of caregiving on their employment (yes or no). Caregivers' employment was impacted by caregiving responsibilities if the caregivers responded "yes" to one or more of the following four consequences of caregiving:

1. Had to go into work late, leave early, or take time off during the day to provide care
2. Had to take a leave of absence from work
3. Had to reduce your regular work hours, or take a less demanding job
4. Had to stop working because of caring for the care recipient

The independent variables, or caregiver factors, were selected for analyses based on their hypothesized conceptual importance and/or the evidence from extant literature.[10] (See Table 1.) Measures of self-reported caregiver burden and health status were derived from well-known scales. Caregiver burden was measured using the 4-item Zarit Burden Inventory.[11] Self-reported mental and physical health were scored from the short form Patient-Reported Outcomes Measurement Information System (PROMIS) global items.[12]

ANALYSIS PLAN

As the first step in the analysis, we used binary logistic regression to calculate odds ratios (ORs) for the association between each caregiver factor (i.e., independent variable) and impact on employment, without controlling for the effects of other variables. For the independent variables with two or more categories, the OR is a comparison of the likelihood of impact between one category versus the reference category. For the continuous independent variables, the odds ratio represents the change in the likelihood of experiencing work impact for each unit increase in the independent variable (e.g., for each 1-year increase in caregiver age).

Next, we conducted multiple logistic regression that included all independent variables to evaluate the independent contribution of each variable, while controlling for all other measures in the model. To obtain the ORs for key predictors, we employed a stepwise method whereby each variable was added to the model one at a time. The entered variables were tested/re-tested at each step, and only the variables that fit the specified stay criterion were retained in the regression model. The stay criterion was 0.05, which means that only the variables with ORs statistically significant at the 0.05 level ($p < 0.05$) were allowed to remain in the final model.

The percentage of missing data for all study variables was negligible (< 1%). One exception was caregiver income, which had approximately 10% missing values. To address missingness on all independent variables except for income, we imputed the missing values using an optimal imputation model for each variable, based on the variable type, scale, and underlying distribution. For example, we used logistic regression for categorical variables, and predictive mean matching for continuous variables. The income variable was imputed using the median household income by ZIP Code of caregivers' residence available from the 2016 American Community Survey.

RESULTS

The mean age among the analysis caregivers (n=535) was 58 years. The analysis caregivers were 78% female. The distribution by caregiver race was 63% White, 20% Black, and 17% other race (including Hispanic, Asian, Hawaiian, American Indian, and other). Sixty-five percent of the analysis caregivers were children of care recipients (CRs), 39% had a college degree or higher, and 91% were located in urban areas.

Seventy percent of the caregivers (n=372) experienced an impact of caregiving on their employment. More specifically, of the 372 caregivers impacted, 341 (92%) had to go into work late, leave early, or take time off to provide care; 133 (36%) had to reduce work hours or take a less demanding job; 86 (23%) had to take a leave of absence from work; and 34 (9%) had to stop working because of caregiving. Because these items were not mutually exclusive, 170 (46%) of the impacted caregivers reported two or more of these consequences.

Table 1 presents associations between each caregiver factor and the impact of caregiving on caregiver employment. Seventeen of the 22 associations examined were statistically significant ($p < 0.05$). Specifically, caregivers with a college degree or above (compared to less than a college degree) were 2.93 times more likely to report consequences of caregiving on their employment. Similarly, caregivers with medium- and high-income levels (compared to low-income level) were more likely to report an impact on employment (OR = 2.16 and OR = 6.18, respectively). Caregivers who resided in rural areas (relative to urban) were 60% less likely, whereas those caring for their care recipient from 5 to fewer than 10 years (compared to fewer than 5 years) were 79% more likely to report an impact of caregiving on employment.

Other factors associated with increased odds of reporting an impact on work included being the child of the CR (OR = 2.78); having a CR with Alzheimer's disease and related dementias (ADRD) (OR = 3.05); living with CR (OR = 1.86); receiving at least 1 hour of respite care per week from any source (including AAA agency, family/friends, and other organizations) (OR = 2.27); higher caregiving intensity (OR = 1.14); higher self-reported caregiver burden (OR = 3.72); and sleep interruptions (OR = 5.36).

The factors that decreased the likelihood of an impact on work included caregiving satisfaction (OR = 0.38); caregiver confidence (OR = 0.53); better caregiver physical and mental health (OR = 0.51 and OR = 0.38, respectively); the caregiver's perception of being very appreciated by the care recipient (OR = 0.45); and the caregiver's perception of receiving all the help they needed (OR = 0.35).

Table 1. Associations between each caregiver factor and the impact of caregiving on employment

Variable	Impacted (% or mean) (n=372)	Bivariate OR	95% Confidence Interval	p-value
CG age	58.10	0.99	0.972 - 1.007	0.2240
CG gender				
Female	69.5%	(ref)		
Male	69.8%	1.01	0.650 - 1.578	0.9539
CG race				
White	71.6%	(ref)		
Black	63.6%	0.69	0.436 - 1.093	0.1139
Other	68.8%	0.87	0.530 - 1.439	0.5954
CG education				
< College degree	61.4%	(ref)		
College degree or above	82.3%	2.93	1.926 - 4.454	<.0001
CG income				
Low (<$30,00)	52.2%	(ref)		
Medium ($30,001-$60,000)	70.2%	2.16	1.396 - 3.339	0.0005
High (>$60,000)	87.1%	6.18	3.661 - 10.440	<.0001
Rurality				
Urban	71.4%	(ref)		
Rural	50.0%	0.40	0.218 - 0.739	0.0034
Length of caregiving				
< 5 years	65.4%	(ref)		
5 - < 10 years	77.2%	1.79	1.144 - 2.792	0.0108
10 years or more	68.2%	1.13	0.705 - 1.823	0.6045
CG cares for other adults over 60				
No	70.8%	(ref)		
Yes	64.0%	0.73	0.464 - 1.158	0.1835
CG cares for children under 18 years old				
No	69.5%	(ref)		
Yes	69.9%	1.02	0.627 - 1.661	0.9341
CG is CR's child (including in-laws)				
No	55.1%	(ref)		
Yes	77.3%	2.78	1.895 - 4.069	<.0001
CG lives with CR				
No	61.2%	(ref)		
Yes	74.6%	1.86	1.276 - 2.705	0.0012
CR has ADRD				
No	58.6%	(ref)		
Yes	81.2%	3.05	2.059 - 4.515	<.0001
CG receives caregiver education/counseling/support group services (all sources)[1]				
No	67.6%	(ref)		
Yes	73.8%	1.35	0.900 - 2.032	0.1467

Continued on next page

Table 1. Associations between each caregiver factor and the impact of caregiving on employment (continued)

Variable	Impacted (% or mean) (n=372)	Bivariate OR	95% Confidence Interval	p-value
CG receives respite care per week (all sources)[1]				
0 hours	61.1%	(ref)		
≥ 1 hour	78.1%	2.27	1.553 - 3.322	<.0001
CG satisfied with caregiving[2]				
All other responses	76.0%	(ref)		
Strongly agree	54.4%	0.38	0.255 - 0.556	<.0001
CG confident as a caregiver[3]				
All other responses	77.5%	(ref)		
Very confident	64.4%	0.53	0.353 - 0.780	0.0014
Caregiving intensity[4]	1.84	1.14	1.024 - 1.270	0.0172
Zarit burden score (lower is better)[5]	2.93	3.72	2.840 - 4.880	<.0001
PROMIS physical (higher is better)[6]	3.69	0.51	0.378 - 0.683	<.0001
PROMIS mental (higher is better)[7]	3.14	0.38	0.291 - 0.496	<.0001
CG feels appreciated by CR[8]				
All other responses	81.3%	(ref)		
A lot	65.9%	0.45	0.273 - 0.725	0.0012
CG's sleep is interrupted by caregiving[9]				
Never	43.8%	(ref)		
Any interruptions	80.7%	5.36	3.581 - 8.018	<.0001
CG receives all help needed[10]				
All other responses	78.7%	(ref)		
Yes, definitely/ Yes, probably	56.4%	0.35	0.239 - 0.510	<.0001

Notes: OR = odds ratio; CG = caregiver; CR = care recipient; ADRD = Alzheimer's disease and related dementias; PROMIS = Patient-Reported Outcomes Measurement Information System.

[1]Sources include the AAA, other agency/organization, or family/friends

[2]Response categories include Strongly Agree, Agree, Neither, Disagree, Strongly Disagree.

[3]Response categories include Very confident, Somewhat confident, Not very confident, Not at all confident.

[4]Measured as the number of activities of daily living (ADLs), with which the caregiver provided assistance daily (eating, dressing, toileting, and mobility) or daily/several times a week (bathing), with greater values indicating greater intensity (range 0-5).

[5]Mean of the four items designed to assess different aspects of caregiver burden: 1) Not having sufficient time for self, 2) Feeling stressed between caregiving and other responsibilities, 3) Feeling strained when around the care recipient, and 4) Feeling uncertain about what to do about the care recipient (1=Never to 5=Nearly always) (range 1-5)

[6]Mean of the four items assessing different aspects of caregiver's physical health on a scale of 1 to 5:1) General rating of physical health; 2) Perceived ability to carry everyday physical activities such as walking, climbing stairs, carrying groceries, or moving a chair; 3) Average rating of fatigue; and 4) Average rating of pain (range 1-5).

[7]Mean of the four items measuring different aspects of caregiver's mental health on a scale of 1 to 5: 1) Perception of quality of life; 2) General rating of self-perceived mental health, including mood and ability to think; 3) Satisfaction with social activities and relationships; and 4) Frequency of being bothered by emotional problems such as feeling anxious, depressed, or irritable (range 1.75-5).

[8]Response categories include A lot, Some, A little, Not at all.

[9]Response categories include Every day, Most days, Some days, Rarely, Never.

[10]Response categories include Yes, definitely; Yes, probably; Not sure; No, probably not; No, definitely not.

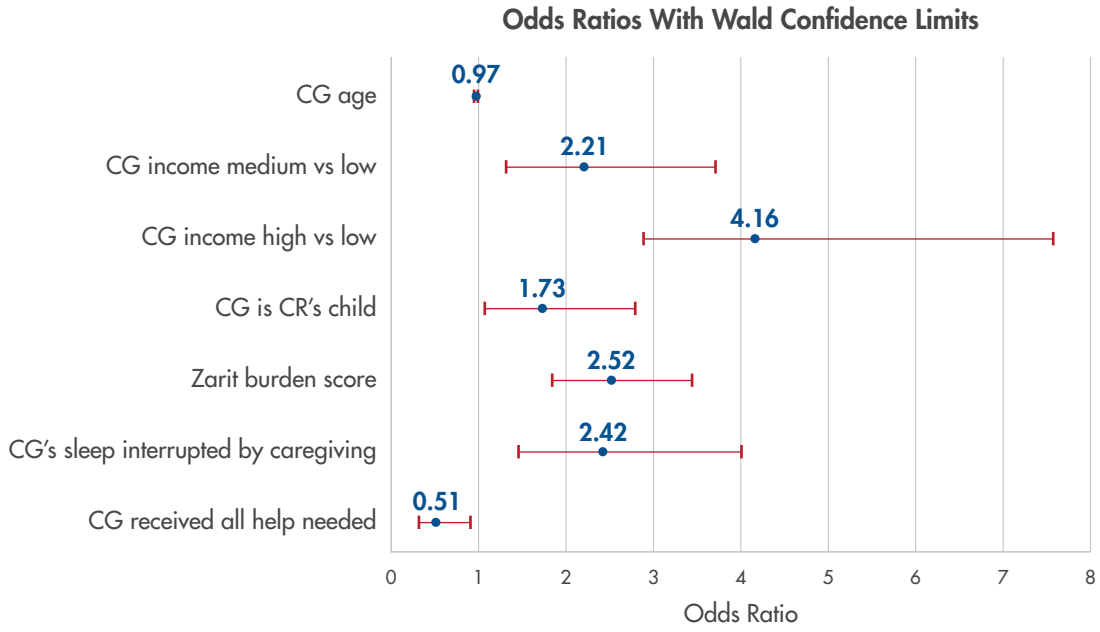
Table 2 and Figure 1 present odds ratios for variables that emerged (based on the stepwise selection) as statistically significant predictors of the impact of caregiving on employment in a multivariable context (i.e., adjusting for other variables in the regression model). In the final model, compared to caregivers in the low-income category, caregivers with medium income were 2.21 times more likely and those with high income were 4.16 times more likely to experience an impact on work. Caregivers who were children of CRs (including-in-laws) were 73% more likely to report consequences of caregiving on their employment than non-child caregivers such as spouses or other relatives. Caregivers who experienced any sleep interruptions because of caregiving were 2.42 times more likely to report consequences of caregiving on their employment. Similarly, greater caregiver burden was related to greater odds (OR=2.52) of experiencing an impact on work. Conversely, caregivers who perceived that they received all the helped they needed (yes, definitely / yes, probably) were 49% less likely to experience an impact on work. Finally, in the multivariable model, each 1-year increase in caregiver age was related to a 3% decrease in the likelihood of experiencing the impact of caregiving on employment.

Table 2. Multivariable associations between caregiver factors and the impact of caregiving on employment (showing statistically significant associations only)

Variable	Adjusted OR	95% Confidence Interval	p-value
CG age	0.97	0.949 - 0.991	0.0065
CG income			
Low (<$30,00)	(ref)		
Medium ($30,001-$60,000)	2.21	1.313 - 3.710	0.0028
High (>$60,000)	4.16	2.880 - 7.575	<.0001
CG is CR's child (including in-laws)			
No	(ref)		
Yes	1.73	1.070 - 2.792	0.0252
Zarit burden score (mean)	2.52	1.845 - 3.443	<.0001
CG's sleep is interrupted by caregiving			
Never	(ref)		
Any interruptions	2.42	1.461 - 4.011	0.0006
CG receives all help needed			
All other responses	(ref)		
Yes, definitely/ Yes, probably	0.51	0.317 - 0.808	0.0043

Note: OR = odds ratio; CG = caregiver; CR = care recipient.

Figure 1. Plot of odds ratios and 95% confidence intervals for statistically significant predictors of the impact of caregiving on employment in the final multivariable model



DISCUSSION

While many caregiver factors were related to the consequences of caregiving on employment when tested individually, several factors emerged as key predictors in a multivariable context. First, as caregiver age increased, the likelihood of impact on employment decreased. Older employed caregivers generally work fewer hours[6] and may have fewer competing responsibilities, such as childcare, than younger caregivers.

Additionally, higher-income caregivers were more likely to experience consequences of caregiving on their employment than caregivers with lower income. In our analysis sample, a higher percentage of caregivers in the medium- and high-income categories worked at least 35 hours per week (full time) than the percent of caregivers in the low-income category. Previous research has shown that caregivers with lower incomes and those who work fewer hours are more likely to report reduction in work hours or leaving the workforce, suggesting that perhaps these caregivers already modified their employment to accommodate caregiving responsibilities.[5,6] Thus, the impact of caregiving on the employment of lower-income caregivers who do not work full time may not be as pronounced as for higher-income caregivers who do work full time.

Caregivers who were children of CRs (including in-laws) were more likely than non-child caregivers to experience the impact of caregiving on their employment. In comparison to spouses and other family members or friends, adult child caregivers are more likely to be younger; have competing responsibilities (e.g., child care); and work more hours, all of which may help to explain this finding. Not surprisingly, we also found that greater caregiver burden was related to greater odds of experiencing consequences of caregiving on employment. This finding aligns with other reports indicating that high-burden caregivers are the most likely group to experience multiple work impacts as a result of caregiving.[6]

This analysis uncovered that experiencing interruptions in sleep as a result of caregiving responsibilities was a strong independent predictor of the impact of caregiving on employment, underscoring the need for instrumental support, such as overnight respite care, that would allow working caregivers to experience better quality sleep. When considered individually (Table 1), receiving at least 1 hour of respite care from any source was associated with higher likelihood of reporting impact of caregiving on employment. This finding suggests that caregivers using respite care may already be burdened by consequences of caregiving, and thus have an increased need for respite care. However, in the multivariable context, caregivers who reported receiving all the help they needed were less likely to report consequences of caregiving on employment. This finding emphasized the importance of meeting perceived caregiver needs as part of overall support, in addition to providing services such as respite care.

Our analysis had a few limitations that should be considered when interpreting results. First, the analysis is cross-sectional, which means that it is difficult to ascertain the direction of the associations between caregiver factors and the impact of caregiving on employment. Additionally, our sample size of employed caregivers was relatively small, predominantly female, White, and residing in urban areas. Therefore, the results may not be generalizable to all employed caregivers in the United States. Lastly, although we included several key aspects of the impact of caregiving on the caregiver's employment, the measure did not capture other potentially important facets of this complex measure, such as actual work performance.

CONCLUSIONS

We identified several characteristics that independently predicted the likelihood of caregivers experiencing consequences of caregiving on their employment. Agencies providing caregiver services, such as NFCSP, as well as employers should consider employed caregivers who are younger, have a higher income, are children of care recipients, do not receive all the help they need, and experience caregiver burden and/or sleep interruptions as potential targets for programs and supports. Such interventions could help caregivers remain in the workforce longer and have more rewarding employment experience.

REFERENCES

1. Reinhard, S. C., Feinberg, L., Choula, R., and Houser, A. (2015). *Valuing the invaluable: 2015 Update*. Washington, DC: AARP Public Policy Institute. Retrieved from https://www.aarp.org/content/dam/aarp/ppi/2015/valuing-the-invaluable-2015-update-new.pdf.
2. Sorrell, J. M. (2014). Moving beyond caregiver burden: identifying helpful interventions for family caregivers. *Journal of Psychosocial Nursing and Mental Health Services, 52*(3), 15-18.
3. Wolff, J. L., Spillman, B. C., Freedman, V. A., and Kasper, J.D. (2016). A national profile of family and unpaid caregivers who assist older adults with health care activities. *JAMA Internal Medicine, 176*, 372-379.
4. National Academies of Sciences, Engineering, and Medicine, 2016, *Families caring for an aging America*. Washington, DC: The National Academies Press. doi: 10.17226/23606.
5. Feinberg, Lynn, and Rita Choula. (2012). *Understanding the impact of family caregiving on work*. Washington, DC: AARP Public Policy Institute.
6. The National Alliance for Caregiving (NAC) and the AARP Public Policy Institute. (2015).*Caregiving in the U.S. 2015*. Washington, D.C.: AARP Public Policy Institute. Retrieved from https://www.aarp.org/content/dam/aarp/ppi/2015/caregiving-in-the-united-states-2015-report-revised.pdf
7. Helman, R., Copeland, C., and VanDerhei, J. (2015). The 2015 retirement confidence survey: Having a retirement savings plan a key factor in Americans' retirement confidence. *EBRI Issue Brief*. Washington, DC: EBRI.
8. Link, G. (2015). The Administration for Community Living: Programs and initiatives providing family caregiver support. *Generations, 39*(4), 57-63.
9. Westat. (2018). *Outcome evaluation of the National Family Caregiver Support Program*. Rockville, MD: Author. Retrieved from https://acl.gov/sites/default/files/programs/2018-12/Caregiver_Outcome_Evaluation_Final_Report.pdf
10. Longacre, M. L., Valdmanis, V. G., Handorg, E. A., and Fang, C.Y. (2017). Work impact and emotional stress among informal caregivers for older adults. Journal of Gerontology Series B: *Psychological Sciences and Social Sciences, 72*(3).
11. Bedard, M., Molloy, D.W., Squire, L., Dubois, S., Lever, J.A., and O'Donnell, M. (2001). The Zarit Burden Interview: A new short version and screening version. *The Gerontologist*, 41, 652-657. doi:10.1093/geront/41.5.652.
12. Hays, R. D., Bjorner, J. B., Revicki, D. A., Spritzer, K. L., and Cella, D. (2009). Development of physical and mental health summary scores from the patient-reported outcomes measurement information system (PROMIS) global items. *Quality of Life Research, 18*(7), 873-880.