International Journal of Care and Caring • vol 5 • no 4 • 557–570 • © Policy Press 2021
Print ISSN 2397-8821 • Online ISSN 2397-883X • https://doi.org/10.1332/239788221X16215259065673
Accepted for publication 20 May 2021 • First published online 21 June 2021

article

A comparison of negative financial events experienced by carers and non-carers following onset of the Great Recession

Kylie Meyer, meyerk1@uthscsa.edu
University of Texas, USA

Zachary Gassoumis, Zach.Gassoumis@med.usc.edu
Kathleen Wilber, wilber@usc.edu
University of Southern California, USA

This study compares carers and non-carers as regards experiences of harmful financial events during and immediately after the Great Recession. Carer status was associated with experiencing more negative financial events since the Great Recession began, even after controlling for covariates in a negative binomial regression. Carers had higher odds of reporting: job loss; moving in with family and friends to save money; and selling possessions to make ends meet. Compared to non-carers, carers were more likely to experience adverse financial events during and following the Great Recession.

Key words informal caregiving • recession • employment • cumulative disadvantage

To cite this article: Meyer, K., Gassoumis, Z. and Wilber, K. (2021) A comparison of negative financial events experienced by carers and non-carers following onset of the Great Recession, 5(4): 557–570, *International Journal of Care and Caring*, DOI: 10.1332/239788221X16215259065673

Introduction

Variation in financial harm during the Great Recession by gender, race, age and education level has received considerable attention, but little is known about how carers fared compared to non-carers. Family carers are the relatives, spouses, partners, friends or neighbours who have a significant relationship with, and who deliver a broad range of assistance to, an older person or an adult with a chronic or disabling condition (Reinhard et al, 2008). Knowing whether carers face a heightened risk to their financial well-being during the economic downturn compared to non-carers is an important first step in determining whether there is a need for targeted policy and service interventions to reduce financial devastation among the 43.5 million Americans caring for someone aged 18 or older, of whom 34.2 million provide care

to someone over age 50 (AARP Public Policy Institute and National Alliance for Caregiving, 2015a; 2015b). Exploration of carers' financial well-being during the economic recession is merited given the financial vulnerability experienced by family carers even in usual economic times (Wakabayashi and Donato, 2006; Lilly et al, 2007; Lee et al, 2015). Applying the principles of cumulative disadvantage theory (Dannefer, 2003), it is conceivable that a decline in macroeconomic conditions exacerbated financial risk in this population and contributed to greater financial harm than was experienced by non-carers.

The dramatic economic downturn that became known as the Great Recession started in 2007 with the collapse of the mortgage securitisation industry, sending waves of economic misfortune throughout the US and global economies. The impact of the Great Recession outstripped that of previous economic downturns. The Great Recession left nearly 11 per cent of Americans unemployed at the peak in 2010 – up from 4.5 per cent in 2007 (Hout and Cumberworth, 2012). Although unemployment during recessions in the early 1980s reached similar heights, the 2007 Great Recession is unmatched in the average length of unemployment; in 2010, 40 per cent of those unemployed had been looking for work for more than six months (Grusky et al, 2011). Poverty among Americans rose from 12 per cent in 2007 to 15 per cent by 2011 (DeNavas-Walt et al, 2013). Wealth and assets were also impacted. By the end of 2009, 16 per cent of homeowners were 'underwater', with negative home equity (Grusky et al, 2011).

In addition to its direct financial impacts, the Great Recession contributed to an increase in the number of family carers. An increase in the number of carers to older adults is attributed to the availability of care providers due to rising unemployment (Mommaerts and Truskinovsky, 2017) and from increased demand for care caused by health deterioration related to stressors from the economic downturn (Costa-Font et al, 2016). Further, loss of retirement savings among older adults also likely contributed to demand for unpaid (informal) care rather than for paid care (Van Houtven, 2015). Indeed, older adults who experienced a decline in housing wealth during the Great Recession relied more heavily on unpaid care (Costa-Font et al, 2019).

Although most Americans were impacted by the Great Recession, its effects were not universally distributed. Younger adults, men, African Americans and those with a high-school degree or less were most vulnerable to its negative effects (Hout and Cumberworth, 2012). In addition to increasing the number of family carers, early research suggests that carers also experienced disproportionate financial loss during the Great Recession. In a cross-sectional survey administered from February 2008 to March 2009, 43 per cent of carers to someone with an illness or disability over age 18 reported lower pay or fewer work hours compared to their pay and work hours prior to the Great Recession's onset, and 15 per cent of carers reported job loss since the Great Recession started (Evercare and National Alliance for Caregiving, 2009). From 2006 to 2010, spousal carers to older adults reported a US$5,000 loss of income among women and a US$2,000 loss in income among men (Van Houtven, 2015). Non-carers of either gender experienced an approximate US$2,000 *increase* in income during this period. Further, parents caring for an adult child with an illness or disability experienced a greater number of harmful financial events than those not providing any kind of care (Song et al, 2018).

However, existing literature on the impact of the Great Recession on family carers remains limited. Early survey research with carers does not provide parallel

information on the financial well-being of non-carers during the Great Recession for comparison (Evercare and National Alliance for Caregiving, 2009). Moreover, while large representative data sets have been used to study caring during the Great Recession (Van Houtven, 2015; Costa-Font et al, 2016; 2019; Mommaerts and Truskinovsky, 2017), samples are often limited to those aged over 50. Consequently, many employed individuals are excluded from analyses. This is an important limitation given the severe negative impact of the Great Recession on employment (Hout and Cumberworth, 2012). Moreover, while Song et al (2018) provide important insights regarding older adults attending to adult children with a disability, the exclusion of carers for older adults limits the generalisability of these findings to inform policies to support carers for older adults.

Drawing on cumulative disadvantage (CD) theory, we seek to overcome these limitations and advance what little is known about how family carers fared during, and in the years following, the Great Recession compared to non-carers. CD theory posits that socio-economic disadvantage accumulates over the life course, rendering earlier life events significant in their potential to set the course for one's socio-economic trajectory (for example, Dannefer, 2003). Previous research suggests that caring perpetuates financial harm, and that carer status can both result from and contribute to poverty, a finding that was identified even prior to the Great Recession (Wakabayashi and Donato, 2006; Lee et al, 2015). Recently, CD theory has been used to demonstrate the negative outcomes of the Great Recession for those caring for a child with a developmental disability (Song et al, 2018). An application of CD theory to existing knowledge of caring and the Great Recession suggests two avenues by which carers may have experienced disproportionate financial vulnerability compared to non-carers during the Great Recession.

Competition for jobs during the Great Recession may have increased the risk of employed carers experiencing the consequences of family responsibility discrimination (FRD), including job loss. FRD is a consequence of employees being unable to meet employer expectations of an 'ideal worker', someone who is always available to work long hours, does not have to take time off and is completely dedicated to their job (Williams and Bornstein, 2007). Although the majority (56 per cent) of carers are employed full time, carers often face disruptions to employment that undermine their ability to perform as an 'ideal worker' (AARP Public Policy Institute and National Alliance for Caregiving, 2015a; Wolff et al, 2016). Importantly, inability to perform as an ideal worker affects more than whether or not carers remain employed. Research completed prior to the Great Recession found no overall difference in employment status between carers and non-carers but did find differences in other employment measures, such as the finding that carers worked fewer hours than non-carers (Lilly et al, 2007). Pressure to perform as an ideal worker may have increased during the Great Recession (Marchiondo and Cortina, 2014). Carers' increased discomfort with taking time off work during the Great Recession relative to before the Great Recession's onset may have been a reaction to heightened workplace competition and a strategy to reduce the risk of FRD and its consequences (Evercare and National Alliance for Caregiving, 2009).

In addition, high out-of-pocket costs related to caring may have prevented carers from reducing their spending in order to better weather the Great Recession. A diary study found that carers for adults with an illness or disability spend an average of US$6,954 annually on goods and services related to caregiving (for example, home

modifications) (Rainville et al, 2016). To mitigate financial harm during the Great Recession, many Americans voluntarily reduced spending and debt (Brown et al, 2010). However, those whose spending outstripped income during the downturn were three times as likely to report financial distress as those whose spending remained below their income (Chalise and Anong, 2017). Yet, many carers could not lower spending on out-of-pocket costs related to caring (Evercare and National Alliance for Caregiving, 2009). Where spending could not be reduced during the Great Recession, half of Americans used credit and another third used their own savings to cover expenses (Baek and DeVaney, 2010). Other ways of managing hardship included delaying debt payments, getting help from others and seeking additional income.

Using previous research as a guide, in this study, we explore two main questions. First, we consider whether carers experienced more financial hardships than non-carers during, and in the initial years following, the Great Recession. Second, we consider whether carers were more vulnerable to some types of financial hardship than others in comparison to non-carers. Given the increased potential for carers to have experienced FRD, we hypothesise that carers were more likely to have lost their job or to have otherwise changed their employment situation after the Great Recession began compared to non-carers. In addition, we expect that the high costs of caring prevented carers from responding to the Great Recession by curbing spending. Given this, compared to non-carers, we expect more carers to have reported missing payments, increasing debt and attempting to secure other resources.

Methods

Data

We selected the Midlife in the US (MIDUS) survey as a data source because it provides rich information on both family carers and financial experiences since the onset of the Great Recession among adults aged 25 to 75 (Ryff et al, 2016). MIDUS is a nationally representative data set that was released in 1997 and reports on the health and well-being of community-based adults. Our study draws on the MIDUS Refresher sample first collected from 2011 to 2014 by random-digit dialling and self-administered questionnaires. Due to the unique economic circumstances of retirees (that is, not reliant on employment-based income), those who were retired at the start of the Great Recession or at the time of data collection were excluded (n = 777). We also tested whether results varied when we excluded those who were not employed in 2008 (n = 470), since job loss was a major negative financial event that could have occurred but from which unemployed participants could theoretically have been protected as they were already jobless. We decided to keep this population in the analytic sample because: (1) results did not vary when they were removed; and (2) participants could have become employed after 2008 but before survey administration. Carers whose caring role began after the Great Recession had ended (N = 159) were also excluded. The final analytic sample was N = 2,641. Supplementary Figure 1: Sample Selection (available online; see Meyer, 2021) illustrates how the analytic sample was selected.

Variables and measures

Dependent variables

MIDUS Refresher participants were asked about 19 financial events that could have occurred to them since the Great Recession began (for example, lost a job, increased credit card debt and so on). Questions were framed as 'yes' or 'no' questions, where an affirmative response indicated that a negative event had occurred. These questions were asked retrospectively, ranging from one to three years after the Great Recession ended, depending on the interview date. We limited our focus to 15 of the 19 events, excluding items where expected cell frequencies were less than 10 when comparing carers and non-carers (for a list of all events, see Table 1).

To observe differences between carers and non-carers on the number of financial events experienced, we created a summary variable using these 15 items. Consistent with Song and colleagues' (2018) approach, the summary variable was created by adding the number of events participants experienced into a count variable. We assessed the summary measure using Cronbach's alpha to check for internal consistency, which was adequate at 0.77. We then conducted an exploratory factor analysis to better understand the types of financial harm captured by this variable. Eigenvalues and the observed theoretical consistency of factor loadings suggested that four factors described the summary variable. We describe these factors as: inability to make payments; employment insecurity; seeking liquid assets; and housing insecurity (see Meyer, 2021: Supplementary Table 1). In addition to assessing the summary variable, we considered the highest-loading items in each factor as dichotomous outcomes to examine different types of economic vulnerability when comparing carers and non-carers.

Independent variable

Carer status was based on responses to the question: 'During the last 12 months, have you, yourself, given personal care for a period of one month or more to a family member or friend because of a physical or mental condition, illness, or disability?' We limited carers in the analytic sample to those who began providing care during the Great Recession (2007 through peak unemployment in 2010) or earlier (n = 184). Carers who did not provide care during this period were excluded from analyses (n = 159; 46.36 per cent of carers), since our research questions pertained to those in this role during the Great Recession. Comparisons between carers included in analyses and those who were excluded are available in Supplementary Tables 2 and 3 (available online; see Meyer, 2021). We did not observe major differences between these two samples.

Covariates

Based on previous literature describing the disparate economic impact of the Great Recession, we selected age, gender, race, educational attainment and marital status as covariates. Variable categories were collapsed and recoded to reflect those categories displayed in Table 2. To better meet linear assumptions in regression models, age was split into a categorical variable: ages 25 to 40, 41 to 54 and 55 and older. These categories were selected to broadly reflect career stage. In addition to demographics,

Table 1: Comparing caregivers and non-caregivers, *N* (%)

	Non-caregivers (*n* = 2,457; 93.03%)	Caregivers (*n* = 184; 6.97%)	X^2
Sample characteristics			
Age (mean/SD/t-value)	45.41 (12.33)	46.97 (11.77)	–1.67
Male	1209 (49.21)	65 (35.33)	13.21***
Non-white	473 (19.40)	28 (15.38)	1.77
Hispanic	149 (6.08)	10 (5.43)	0.12
Unmarried	859 (35.06)	81 (44.01)	5.99*
Education			16.84**
High school or less	504 (20.56)	57 (30.98)	
Some college	758 (30.91)	62 (33.70)	
College (4+ years)	667 (27.20)	40 (21.74)	
Graduate school	523 (21.33)	25 (13.59)	
Self-assessed physical health			23.96***
Excellent	548 (22.30)	27 (14.67)	
Very good	894 (36.39)	47 (25.54)	
Good	662 (26.94)	71 (38.59)	
Fair/poor	353 (14.37)	39 (21.20)	
Self-assessed financial well-being			4.74
Good	675 (39.45)	49 (37.98)	
Fair	580 (33.90)	35 (27.13)	
Poor	456 (26.65)	45 (34.88)	

(Continued)

Table 1: *(continued)*

	Non-caregivers (*n* = 2,457; 93.03%)	Caregivers (*n* = 184; 6.97%)	X^2
Negative financial outcomes			
Summary variable (mean/SD/t-value)	3.03 (2.65)	4.48 (3.46)	–6.98***
Missed mortgage or rent payment	352 (14.33)	40 (21.74)	7.43**
Threatened with eviction or foreclosure	193 (7.86)	28 (15.22)	12.10***
Missed other debt payment	344 (14.01)	46 (25.14)	16.73***
Missed credit card payment	415 (16.89)	54 (29.51)	18.56***
Sold possessions to make ends meet	557 (22.86)	86 (46.74)	53.78***
Lost a job	529 (21.56)	60 (32.61)	12.06***
Started a job you did not like	325 (13.24)	37 (20.11)	6.83**
Taken a job below your education or experience level	456 (18.58)	58 (31.52)	18.27***
Exhausted unemployment benefits	228 (9.36)	35 (19.02)	17.71***
Taken an additional job	405 (16.49)	48 (26.09)	11.09***
Increased credit card debt	786 (32.04)	60 (32.79)	0.04
Borrowed money against house or from bank	431 (17.55)	33 (18.03)	0.02
Cut back on spending	1887 (76.80)	163 (88.59)	13.69***
Had friends or family move in to save money	368 (14.98)	52 (28.26)	22.58***
Moved in with friends or family to save money	178 (7.24)	25 (13.59)	9.70**

Notes: $N = 2{,}641$. $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$. When we ran bivariate analyses while excluding those who were not employed in 2008, we observed little difference in bivariate findings, though Pearson-chi-squared values did increase considerably for the outcomes 'Missed other debt payment' ($X^2 = 8.70$, p-value < 0.001) and 'Missed credit card payment' ($X^2 = 7.44$, p-value < 0.001). This suggests that when considering those who were employed at the start of the Great Recession, differences between caregivers and non-caregivers regarding missing debt payments are attenuated. At the same time, the proportion of participants reporting each outcome across cells is relatively small.

self-assessed health was included as a covariate given the negative impact of poor health on remaining in the paid labour force (for example, Van Rijn et al, 2014). Self-assessed physical health included five categories, ranked 0 to 4, corresponding with evaluations of excellent, very good, good, fair and poor health. We collapsed responses indicating 'fair' (n = 280; 10.60 per cent) or 'poor' (n = 112; 4.24 per cent) health into one category because of small cell sizes (Dowd and Zajacova, 2010).

We also included a variable to account for financial circumstances prior to the Great Recession given that: (1) those with lower socio-economic standing are more likely to become carers (Lee et al, 2015); and (2) those with worse financial situations prior to the Great Recession were more financially vulnerable to the downturn (DeNavas-Walt et al, 2013). Analyses controlled self-assessed financial well-being prior to the Great Recession. We selected this item over objective measures of financial well-being (for example, income) given that this rating is more likely to account for participants' overall financial situation, including both income and expenses. Self-assessed financial well-being was based on a scale ranging from 0 (worst) to 10 (best). Categories were collapsed into three groups of assessments of financial well-being: 'good' (8 to 10), 'fair' (6 to 7) and 'poor' (0 to 6). This was done to maintain robust cell sizes. These cut-off points were selected so that participants were distributed as evenly as possibly between groups.

Since post-Great Recession data collection extended from 2011 to 2014, a control variable was added to control for the year the survey was administered. A categorical variable was created for those completing the survey in 2011 to 2012, in 2013 and in 2014.

Analyses

Carers and non-carers were compared as regards demographic characteristics and financial events since the Great Recession began by using Pearson chi-square and t-tests. To determine whether carers experienced a greater number of negative financial events since the Great Recession began, we applied a negative binomial regression model. Negative binomial models can manage count variables that display over-dispersion. To examine which events carers were more likely to have experienced compared to non-carers, logistic regression models were applied. Results from the factor analysis were used to select which events were assessed (that is, the highest-loading item for each factor). We used the highest-loading events rather than factor variables themselves to support the interpretation of results and their policy application, and because the scale was not validated (and, thus, it is possible that important components of each factor were absent). We used multiple imputation by fully conditional specification to account for missing data, which reached no more than 30 per cent on any variable. Prior to pooling imputed data sets, we compared nested models of the last imputed data set with and without carer status on the Akaike information criterion (AIC) to determine whether including this variable improved the ability of regression models to explain variation in the odds of financial events occurring. Analyses were performed in SAS version 9.4. Codes for this analysis are available from the corresponding author upon request and inquiries for coding decisions are welcome.

Findings

Sample characteristics

Comparing carers and non-carers

Among the 2,641 participants in the analytic sample, 7.0 per cent ($n = 184$) identified as carers who provided support during the Great Recession (2010 or earlier). Consistent with other prevalence studies, women were more likely to be carers than men (64.7 per cent versus 50.8 per cent; $X^2 = 13.21$, p-value < 0.001). Carers also had lower educational attainment than non-carers (31.0 per cent with a high-school education or less versus 20.6 per cent among non-carers; $X^2 = 16.84$, p-value < 0.01). Carers did not rate their financial situation prior to the Great Recession differently than non-carers ($X^2 = 4.74$, $p > 0.05$) (see Table 1).

Description of caregiving circumstances

Carers provided an average of 28.0 hours of care per week ($SD = 29.8$). Carers in this sample had been providing care for an average of 7.9 years ($SD = 6.5$). Most carers (88.0 per cent [$n = 162$]) assisted with instrumental activities of daily living (for example, shopping, cooking, laundry and so on), and just under two thirds (60.1 per cent [$n = 110$]) assisted with personal care/activities of daily living (for example, bathing, dressing, toileting and so on). One third of carers provided assistance to a child with an illness or disability (31.5 per cent [$n = 58$]), another one-third of carers were an adult child or child-in-law of the care recipient (34.0 per cent [$n = 59$]), just 7.1 per cent ($n = 13$) of carers assisted a spouse. The remaining carers reported having another type of relationship with the care recipient (29.4 per cent [$n = 54$]). Supplementary Table 2 (available online; see Meyer, 2021) further describes the characteristics of carers in the analytic sample, as well as those excluded because they became carers following the Great Recession. Notably, bivariate comparisons of Great Recession and non-Great Recession carers show that non-Great Recession carers were in this role for a shorter time and were less likely to care for an adult child.

Bivariate results

Compared to non-carers, carers were more likely to experience nearly every negative financial event considered since the start of the Great Recession (see Table 1; see also Meyer, 2021: Supplementary Figure 2: Comparison of caregivers and non-caregivers on financial outcomes since the Great Recession). The most striking difference was the extent to which carers sold possessions to make ends meet ($X^2 = 53.78$, p-value $<$ .001), where 46.7 per cent ($n = 86$) of carers reported doing so compared to 22.7 per cent ($n = 557$) of non-carers. Overall, carers reported experiencing a greater number of negative financial events since the Great Recession began than non-carers (t-value = –6.98, p-value < 0.001), averaging 4.48 (SD = 3.46) negative events compared to non-carers' average of 3.03 (SD = 2.65) of the 15 events examined.

Table 2: Negative binomial regression for summary variable of Great Recession outcomes

Variable	*B*	SE	*p*-values
Intercept	1.00	0.26	< 0.001
Caregiver status	0.30	0.06	< 0.001
Age			
25 to 39	0.13	0.04	< 0.001
55 and older	–0.14	0.25	0.59
Male	–0.04	0.03	0.23
Unmarried	0.18	0.04	< 0.001
Non-white	0.15	0.04	< 0.001
Hispanic	0.09	0.07	0.20
Education			
High school or less	–0.09	0.05	0.05
College	–0.20	0.04	< 0.001
Graduate school	–0.28	0.05	< 0.001

Notes: *N* = 2,641. Logistic models also controlled for the year the survey was administered, self-rating of financial situation prior to the Great Recession and self-assessed health. In bivariate assessments with this outcome, all variables were significant at the 0.25 level. AIC increased by 26.27 when caregiver status was removed from the model. Results largely did not vary when we ran this model while excluding those who were not employed in 2008. The coefficient for caregiving increased to *B* = 0.33 and the *p*-value remained under the 0.001 threshold. Full model results from this analysis are available upon request.

Regression results

Negative binomial regression results

Results from the negative binomial regression indicate that being a carer during the Great Recession was significantly associated with experiencing more negative financial events since the Great Recession began ($B = 0.30$, p-value < 0.001). By comparison, the next largest coefficient in the model was attending graduate school, which was associated with experiencing a lower number of negative financial events compared to someone with some college education ($B = -0.28$, p-value < 0.001) (see Table 2).

Logistic regression results

The highest-loading items for each factor identified in the summary variable were used as outcome variables in logistic regression models. We also ran a logistic regression model for reports of selling possessions to make ends meet given the very strong bivariate association observed. Carer status was significantly associated with whether one lost a job since the Great Recession began (OR = 1.65, CI 1.18–2.31), having friends or family move in to save money (OR = 1.91, CI 1.33–2.73), and selling possessions to make ends meet (OR = 2.57, CI 1.83–3.54) (see Meyer, 2021: Supplementary Tables 4–6). When controlling for covariates, carers were no more likely than non-carers to report that they had missed a mortgage or rent payment (OR = 1.33, CI 0.89–1.98) or increased credit card debt (OR = –0.95, CI 0.69–1.33) since the start of the Great Recession (see Meyer, 2021: Supplementary Tables 7–8).

Discussion

Our study found that family carers experienced more negative financial events since the Great Recession began than non-carers, as hypothesised. These findings remained significant when controlling for population characteristics most likely to moderate the impact of the economic downturn, as well as participants' financial circumstances prior to the Great Recession.

We also hypothesised that we would observe worse employment outcomes among carers compared to non-carers since the Great Recession began. We reasoned that carers would be more likely to experience FRD when job competition increased during the Great Recession (Marchiondo and Cortina, 2014). Although research conducted prior to the Great Recession indicated no overall difference in the employment status of carers and non-carers (Lilly et al, 2007), we found that carers were more likely to lose their job after the Great Recession began than non-carers. Still more research is needed to confirm whether this difference was due to FRD, though self-reports of increased discomfort among carers taking time off during the Great Recession lends credence to this interpretation (Evercare and National Alliance for Caregiving, 2009).

We also posited that carers would experience more negative financial events related to spending and debt payment because of difficulty reducing spending related to caring, especially given carers' increased risk of poverty relative to non-carers even prior to the Great Recession (Wakabayashi and Donato, 2006). While carers were no more likely than non-carers to increase credit card debt or miss a mortgage or rent payment, they were more likely to move in with friends or family to save money and sell possessions to make ends meet. These findings should be interpreted cautiously, however, and they may not entirely reflect financial distress among carers. Care recipients may move in with the carer both to save the carer money and for additional convenience, and selling possessions could also be a ramification of consolidating households. Still, housing accounts for one of the highest out-of-pocket costs encountered by carers (Rainville et al, 2016). Pooling housing resources would yield considerable cost savings for some carers. Further, given carers' increased risk of poverty relative to non-carers even prior to the Great Recession, differences in spending and debt relative to non-carers may have occurred during this period regardless of the Great Recession.

Overall, findings from these analyses partially demonstrate adherence to CD theory. When faced with a financial downturn, carers were less insulated from its effects than non-carers, and they experienced more negative financial events than non-carers. Interestingly, carers did not rate their financial situations prior to the Great Recession as being any worse than non-carers, contrary to what we would expect under CD theory. At the same time, carers were more likely than non-carers to be married, and subjective assessment of their financial situations may reflect household financial situation, while many of the adverse events we considered were at the individual level (for example, job loss). Results from an ancillary Pearson chi-squared analysis support this assumption. Married participants rated their financial situation to be slightly better (48.02 per cent 'good'; 32.62 per cent 'fair'; 19.36 per cent 'poor') than non-married participants (39.26 per cent 'good'; 26.47 per cent 'fair'; 34.27 per cent 'poor') ($X^2 = 98.92$, p-value < 0.001).

Limitations

Our intention with this study was to learn about carers' experiences of negative financial events since the start of, and immediately following, the Great Recession in comparison to non-carers. We did this by examining retrospective questions about a range of negative financial events that could have occurred during this period by caring status. Given this, we cannot draw causal conclusions about the effect of caring on experiences of financial harm, since time order cannot be established. We partially addressed the possibility of reverse causality by controlling for financial situation prior to the Great Recession. Similarly, although questions were framed in terms of the Great Recession, we acknowledge that some of the financial events examined could occur more frequently to carers during normal economic periods (Wakabayashi and Donato, 2006; Lilly et al, 2007). Using panel data where questions about financial experiences are asked during normal economic times would strengthen findings. However, we are not aware of any data set that supports such analyses on a representative sample of carers. At the same time, we acknowledge that the sample of carers we considered was not entirely representative of carers in the US. Our sample did not include: (1) carers who were new to caring, since carers who entered this role more recently had not experienced caring during the Great Recession; and (2) carers who relinquished this role prior to when data were collected. The exclusion of more recent carers likely contributed to a high proportion of carers for adult children, whose care role may extend for longer periods than carers for older adults with life-limiting illnesses. Further, because we restricted our sample to those who were not retired in 2008, there were very few spousal carers in our analytical sample. Our choice to exclude retirees may also have inadvertently excluded care partners who choose to retire early because of care demands, thus limiting our ability to assess more fully the application of CD theory with these data.

Implications

Our results suggest a need for policies to attenuate financial harm to carers during economic downturns. We recommend that policymakers and service directors extend educational resources on: (1) programmes that reduce the extent to which caring disrupts work; and (2) ways to cover the costs of caring. Even during normal economic times, carers report needing financial information (Shrestha et al, 2011). In response, the National Family Carer Support Program provides legal and financial education through local agencies. Educational resources and outreach regarding workplace protections, benefits enrolment and tax credits for caring costs may be particularly important during financial downturns. Social workers employed at community-based organisations serving carers are advised to emphasise information about such programmes during challenging economic periods.

Conclusion

The financial impacts of the Great Recession were far-reaching. However, its effects were not universal. Some populations were more at risk than others. This study provides a basis for adding family carers to those populations considered most vulnerable to economic downturns. Recognition of increased vulnerability among carers compared to non-carers during financial downturns should prompt research

on the causes of financial harm among carers during recessions and an exploration of services and policies to attenuate financial risk.

Funding

The project described was supported by the National Center for Advancing Translational Sciences, National Institutes of Health (NIH), through Grant TL1 TR002647, as well as the University of Southern California (USC) Final Year Fellowship. The content is solely the responsibility of the authors and does not necessarily represent the official views of the NIH or USC.

Acknowledgements

The authors would like to acknowledge the generous contributions of Susan Enguídanos, PhD, MPH in providing feedback on this manuscript.

Conflict of interest

The authors declare that there is no conflict of interest.

References

AARP Public Policy Institute and National Alliance for Caregiving (2015a) *Caregiving in the U.S.*

AARP Public Policy Institute and National Alliance for Caregiving (2015b) *Carers of Older Adults: A Focused Look at Those Caring for Someone Age 50+*, Washington, D.C.

Baek, E. and DeVaney, S.A. (2010) How do families manage their economic hardship?, *Family Relations*, 59(4): 358–68. doi: 10.1111/j.1741-3729.2010.00608.x

Brown, M., Haughwout, A., Lee, D. and Van Der Klaauw, W. (2010) The financial crisis at the kitchen table: trends in household debt and credit, *Current Issues in Economics and Finance*, 19(2).

Chalise, L. and Anong, S. (2017) Spending behavior change and financial distress during the Great Recession, *Journal of Financial Counseling and Planning*, 28(1): 49–61. doi: 10.1891/1052-3073.28.1.49

Costa-Font, J., Karlsson, M. and Oien, H. (2016) Careful in the crisis? Determinants of older people's informal care receipt in crisis-struck European countries, *Annals of Epidemiology*, 25(Suppl 2): 25–42.

Costa-Font, J., Frank, R. and Swartz, K. (2019) Access to long term care after a wealth shock: evidence from the housing bubble and burst, *The Journal of the Economics of Ageing*, 13: 103–10. doi: 10.1016/j.jeoa.2018.07.001

Dannefer, D. (2003) Cumulative advantage/disadvantage and the life course: Cross-fertilizing age and social science theory, *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 58(6): S327–37.

DeNavas-Walt, C., Proctor, B.D. and Smith, J.C. (2013) Income, poverty, and health insurance coverage in the United States: 2012, current population reports, Report for the U.S. Department of Commerce, P60-245. US Census Bureau, September, https://www.census.gov/prod/2013pubs/p60-245.pdf.

Dowd, J.B. and Zajacova, A. (2010) Does self-rated health mean the same thing across socioeconomic groups? Evidence from biomarker data, *Annals of Epidemiology*, 20(10): 743–9. doi: 10.1016/j.annepidem.2010.06.007

Evercare and National Alliance for Caregiving (2009) The Evercare survey of the economic downturn and its impact on family caregiving, http://www.caregiving.org/data/EVC_Carers_Economy_Report%20FINAL_4-28-09.pdf.

Grusky, D., Western, B. and Wimer, C. (2011) *The Great Recession*, Russell Sage Foundation.

Hout, M. and Cumberworth, E. (2012) The labor force and the Great Recession, Russell Sage Foundation and Stanford Center on Poverty and Inequality.

Lee, Y., Tang, F., Kim, K.H. and Albert, S.M. (2015) The vicious cycle of parental caregiving and financial well-being: a longitudinal study of women, *The Journals of Gerontology Series B*, 70(3): 425–31. doi: 10.1093/geronb/gbu001

Lilly, M.B., Laporte, A. and Coyte, P.C. (2007) Labor market work and home care's unpaid carers: a systematic review of labor force participation rates, predictors of labor market withdrawal, and hours of work, *Milbank Quarterly*, 85(4): 641–90. doi: 10.1111/j.1468-0009.2007.00504.x

Marchiondo, L.A. and Cortina, L.M. (2014) Plus Ça Change …, *Analyses of Social Issues and Public Policy*, 14(1): 239–60. doi: 10.1111/asap.12028

Meyer, K. (2021) Supplementary analyses, Figshare, https://doi.org/10.6084/m9.figshare.11497140.

Mommaerts, C. and Truskinovsky, Y. (2017) *The Cyclicality of Informal Care*, Philadelphia, PA: American Economics Association.

Rainville, C., Skufca, L. and Mehegan, L. (2016) *Family Caregiving and Out-of-pocket Costs: 2016 Report*, Washington, D.C.: AARP.

Reinhard, S., Given, B. and Petlick, N. (2008) Supporting family carers in providing care, in R. Hughes (ed) *Patient Safety and Quality: An Evidence-Based Handbook for Nurses*, Rockville, MD: Agency for Healthcare Research and Quality.

Ryff, C., Almeida, D., Ayanian, J., Binkley, N., Carr, D., Coe, C. and Williams, D. (2016) *National Survey of Midlife Development in the United States (MIDUS Refresher), 2011–2014*, Ann Arbor, MI: Inter-university Consortium for Political and Social Research.

Shrestha, S., Judge, K.S., Wilson, N.L., Moye, J.A., Snow, A.L. and Kunik, M.E. (2011) Utilization of legal and financial services of partners in dementia care study, *American Journal of Alzheimer's Disease & Other Dementias*, 26(2): 115–20.

Song, J., Mailick, M.R. and Greenberg, J.S. (2018) The impact of the Great Recession on midlife and older parents of individuals with a mental health problem or a developmental disability, *The Gerontologist*, 58(3): 448–55. doi: 10.1093/geront/gnw269

Van Houtven, C. (2015) Informal care and economic stressors, in J. Gaugler and R. Kane (eds) *Family Caregiving in the New Normal*, Burlington: Elsevier Science, pp 105–33.

Van Rijn, R.M., Robroek, S.J., Brouwer, S. and Burdorf, A. (2014) Influence of poor health on exit from paid employment: a systematic review, *Occupational and Environmental Medicine*, 71(4): 295–301. doi: 10.1136/oemed-2013-101591

Wakabayashi, C. and Donato, K.M. (2006) Does caregiving increase poverty among women in later life? Evidence from the Health and Retirement Survey, *Journal of Health and Social Behavior*, 47(3): 258–74. doi: 10.1177/002214650604700305

Williams, J. and Bornstein, S. (2007) Evolution of FReD: family responsibilities, discrimination and developments in the law of stereotyping and implicit bias, *Hastings Law Journal*, 59(6): 1311–58.

Wolff, J.L., Spillman, B.C., Freedman, V.A. and Kasper, J.D. (2016) A national profile of family and unpaid carers who assist older adults with health care activities, *JAMA Internal Medicine*, 176(3): 372–9. doi: 10.1001/jamainternmed.2015.7664