How Caregiving for Parents Reduces Women's Employment: Patterns Across Sociodemographic Groups*

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Abstract

This chapter examines the social patterns of elder caregiving among women ages 50 and older in the United States. We find that women who provide personal care for parents or parents-in-law, tend to be from more advantaged sociodemographic groups, with larger differences by socio-economic status than by race and ethnicity. Prior to initiating care, caregivers also have greater labor market attachment than non-caregivers. In contrast, although less likely to provide care, women from less advantaged groups tend to provide more time-intensive care when they do provide care, particularly in the extreme upper-end of the distribution of care hours. We find strong negative associations between caregiving and employment, hours, and earnings, both immediately and over a longer 10-year period. The relationship between care and work is similar across the sociodemographic groups that we examine.

Keywords: long-term care, caregiving, eldercare, informal care, female labor supply, female labor force participation

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As the United States population ages, our health care system faces enormous pressure in providing care for the elderly population. The popular press is replete with stories noting shortages of home health care workers (e.g. Gleckman, 2019), and both home care and institutional care are extremely expensive. Home health aides cost an average of $22 per hour, or $45,000 per year for eight hours of care per day—although individuals suffering from dementia likely need even more intensive care. Nursing homes, which do provide around-the-clock care, typically cost over $100,000 per year (Genworth, 2019). Perhaps surprising to some, neither Medicare nor Medigap insurance plans provide coverage for custodial care.[1] Medicaid, the means-tested health insurance program for low-income elderly and disabled people, does cover such care and is the primary payer of formal long-term care in the U.S. However, to qualify for Medicaid coverage, one needs to have very low income and few assets other than a home. Individuals with too many resources to qualify for Medicaid coverage can opt to purchase separate long-term care insurance policies, but such policies are not widely held. Only 10 to 15 percent of older individuals have such coverage (Finkelstein and McGarry, 2006). Given the costs of formal long-term care and the lack of insurance coverage for most, much of the care received by the elderly is provided informally by family members.

This burden of care falls unevenly across the working-age population. Research on caregiving has nearly uniformly found that women are significantly more likely to provide personal care than are men. Among those providing care for a spouse, the preponderance of female caregivers is not surprising. Women tend to live longer than men and to marry men who are older than they are. Thus, while husbands often receive care from their wives, the reverse is less likely.

[1] Medicare covers skilled long-term care for a limited period of time. Medigap policies, or Medicare Supplemental Insurance Plans, are separate insurance policies designed to cover the "gaps" in Medicare.

Care for parents is also divided along gender lines: daughters are far more likely to provide care than are sons.[2]

While much attention has been paid to these gender differences in caregiving, somewhat less is known about the distribution of caregiving and its consequences across sociodemographic groups in the U.S. population. Given the potential for caregiving to negatively impact a caregiver's employment and financial status, it is vital that we understand who is most at risk of needing to provide this care, particularly the extent to which this need varies across sociodemographic groups. If the burden of care is being disproportionately shouldered by the least advantaged members of society, any adverse impacts from caregiving could compound existing precarities and heighten inequality.

This chapter investigates differences in caregiving responsibilities and the related effects on employment and financial status across women from various sociodemographic groups. We examine patterns both by socioeconomic status (SES), as proxied primarily by education and wealth, and by race and ethnicity. Because much of our interest lies in the relationship between caregiving and work, we focus on the provision of personal care by prime-age women to their elderly parents and parents-in-law. While caregiving for spouses occurs most frequently when the caregiver is beyond the typical retirement age (Fahle and McGarry, 2018), caregiving for parents occurs earlier in a woman's life and thus potentially has a greater effect on labor market behavior. Any negative effect on market work during these prime working years could exacerbate the elevated risk of poverty faced by elderly women relative to men.

[2] Coward and Dwyer (1990) report that daughters are three times more likely to provide care than sons while McGarry (1998) finds that 70 percent of child caregivers are daughters. Perhaps unsurprisingly, the higher propensity for women to provide care is also evident outside the U.S. (OECD, 2019) and holds even in countries where parents have traditionally relied on sons for old-age support. In these cases, it is the daughters-in-law (rather than the sons) who assume the lion's share of caregiving duties (Jang, Avendano, and Kawachi, 2012).

Although we anticipate that caregiving and its impacts will likely vary by socioeconomic status, it is not clear a priori which groups are most at risk of providing eldercare, or which groups are most likely to experience diminished labor market outcomes when they do provide care. On the one hand, many factors suggest that a greater burden will be borne by those with fewer resources. First, and perhaps most obviously, low-income families are unlikely to be able to afford to pay for formal care or to have private long-term care insurance that would cover the cost. Second, the typical argument for the preponderance of female caregivers is that the opportunity cost of time, as measured by foregone wages, is lower, on average, for women relative to men. Extending this argument to examine differences in caregiving across socioeconomic status, a lower opportunity cost of time may lead to those with lower earnings selecting into caregiving at greater rates. Unfortunately, these women likely also have less retirement savings and a lower probability of pension or health insurance coverage, adding to the precariousness of their financial situation. Third, there will be differences across the population in the probability of being "at risk" of having a parent or parent-in-law who needs care. In particular, rates of functional limitations are likely to be higher for low-income elderly, indicating a greater likelihood that a parent will need care.

On the other hand, lower-SES women may be protected in some ways. First, while the ability to pay out-of-pocket for formal care will be less, low-income and low-wealth parents will be more likely to qualify for Medicaid, which covers home health and nursing home care—making formal care more affordable for the family and providing a ready substitute for care from a child. Second, low-income parents have shorter life expectancies on average. From the perspective of their daughters' employment, the effect could be either positive or negative: it could reduce the number of years during which a daughter needs to provide care, or it could more negatively affect long-term employment if the need to provide care arises earlier during the prime working years.

Third, there may be differences by SES in the number of siblings or siblings-in-law, potential substitutes for the respondent herself in the caregiving realm.

There are also numerous reasons to expect caregiving differences by race and ethnicity. For example, older Hispanic adults face higher rates and earlier onset of diabetes and higher rates of obesity than non-Hispanic white adults (Aranda and Knight 1997). Similarly, there may be differences in cultural attitudes towards caregiving that affect the probability of providing care and/or the associated stress. Research suggests that Hispanic adults are more likely to rely on family care than are non-Hispanic white or non-Hispanic Black adults (e.g., Rote and Moon, 2018; Pinquart and Sorensen, 2005), while non-Hispanic Black adults may feel less emotional stress when caring for an elderly family member. Furthermore, demographic forecasts indicate that the fraction of populations of color that is ages 65 and older is increasing even faster than the share of the overall population that is ages 65 and older—suggesting that, all else constant, pressure on non-white and Hispanic daughters to care for an elderly parent is likely to grow more rapidly. Finally, when they do provide care, there is evidence that Black and Hispanic caregivers appear to be more likely to reduce hours of work than are other groups (Covinsky et al., 2001).

This chapter takes a closer look at the differences in caregiving across sociodemographic groups, highlighting differences by education level, wealth, and race/ethnicity. We draw on panel data from the Health and Retirement Study (HRS) to examine the effect of caregiving on employment for a cohort of women in their prime earning years. We use data over a ten-year window to examine the concurrent effects of caregiving on work as well as longer-term effects.

Perhaps unsurprisingly for those who have followed articles in the popular press or who have first-hand experience with caregiving, we find little evidence of a single type of caregiver. Most caregiving is predicated on the need of the parent and the lack of alternative caregivers. The

strongest predictors of caregiving are the number of unmarried parents, their age, and the absence of sisters. Contrary to expectations informed by models of opportunity cost, but in line with earlier results (e.g., McGarry 1998), there is no evidence that caregivers are drawn from the population with weaker attachment to the labor force. If anything, the reverse is true: the caregivers in our sample tend to have stronger attachment to the labor force, more education, better jobs, and greater economic resources. Caregivers are also marginally more likely to be white and non-Hispanic. In part, these results can be explained by differences in life expectancy and family structure across sociodemographic groups: more advantaged women are simply more likely to have living parents and fewer alternate caregivers. Yet, even when we focus exclusively on women who have living parents or parents-in-law and are thus "at risk" of needing to provide care, we find that higher-SES women are more likely than lower-SES women to be caring for parents. We conjecture that greater resources and perhaps greater job flexibility enable more advantaged women to provide eldercare.

While more advantaged women appear to provide care at greater rates, we find that women with lower levels of education and non-white women report more time-intensive caregiving conditional on providing care. The differences are most pronounced in the upper tail of the distribution of time spent providing care, with less educated and Hispanic women providing considerably more hours than other groups. Less advantaged women are also far more likely to struggle with the cost of formal care for their parents. Replacing family care with formal care for the average non-white, Hispanic caregiver would cost more than one-third of her family income. Overall, our evidence paints a complex picture of the inequalities in the distribution of caregiving across older women in the U.S., with data on the extensive and intensive margins of caregiving providing different perspectives on the burden of care.

However, regardless of a woman's sociodemographic group, our results indicate that caregiving has a significant negative relationship with labor market activity; it is associated with a lower probability of work, fewer hours of work, and lower earnings. These effects are felt concurrently with caregiving but also appear to persist years into the future. Following the women in our data over a ten-year period, we see that women who were caregivers during our window of observation have worse outcomes than non-caregivers at the end of the period. We find similar effects across the sociodemographic groups that we examine. Taken together, this evidence suggests that caregiving can reduce women's employment during their prime working years and beyond. Caring for elderly parents may thus be a potentially important force reducing the likelihood of working longer among women across a broad array of sociodemographic groups.

Section 1: Caregiving rates are high and rising

The need for long term care is already pervasive, and the demand is expected to increase sharply with the aging of the population. It is estimated that 69 percent of elderly individuals will need help with the Activities of Daily Living (ADLs) – tasks such as bathing, eating, dressing, and toileting – at some point during their lives (Kemper et al., 2006). For the vast majority of individuals, this care will come from family members, primarily from daughters or wives. Among the non-institutionalized population receiving help with ADLs, 66 percent receive help exclusively from family members while another 26 percent receive assistance from both family (informal) and paid (formal) care providers; only 9 percent rely solely on formal care (Doty, 2010).[3]

[3] One might speculate that the preponderance of family caregiving would indicate a preference for such care. However, Brown et al. (2012) find that when given a hypothetical choice, nearly equal fractions of respondents prefer care from family members and care from formal caregivers. In examining these data anew for this paper, there do not appear to be strong differences in preference by socioeconomic status.

This reliance on informal care means that a large fraction of non-elderly adults will provide care at some point, and caregiving for parents peaks among individuals in their 50s. The Bureau of Labor Statistics (2017) estimates that in 2015-16, 21.3 percent of those 45-54 and 24.3 percent of those 55-64 provided care at some point, but other estimates suggest higher rates. Increased longevity, lower fertility, and changes in disease-specific mortality all point to sharp increases in these numbers. Attempts to assess the cost of this informal care are "back of the envelope" calculations at best because we do not know what caregivers would be doing with their time were they not providing care. Whether caregivers are leaving highly-paid jobs, cutting back on hours at these jobs, or foregoing leisure has important implications for estimates of the true cost of informal care.

Both direct reports regarding the impact of care on work and effects inferred from correlations in panel data suggest that caregiving has a negative impact on employment. The National Association of Insurance Companies / American Council of Life Insurers finds that more than a third of caregivers report reductions in paid work as a result of caregiving: 10 percent cut back on hours worked, 6 percent left paid work entirely, 17 percent took a temporary leave of absence from their jobs. An additional 4 percent turned down promotions, directly reducing wage growth in the near term and perhaps future opportunities for promotions as well. Other studies have similarly found a negative correlation between labor market participation and caregiving—with either a reduction in the probability of working (e.g., Ettner, 1996; Bolin et al., 2008; Carmichael et al., 2010; Van Houtven et al., 2013) or a reduction in hours worked (Johnson and Lo Sasso, 2006).

Section 2: The Health and Retirement Study Data

We use data from the Health and Retirement Study (HRS), a panel survey that follows individuals from their 50s until their deaths, with interviews conducted every two years. When appropriately weighted, the sample is approximately representative of the U.S. population ages 50 and older.[4] Respondents in the initial cohort were first interviewed in 1992 when they were between ages 51 and 61. Spouses or partners of sample persons were included in the survey regardless of age. New cohorts consisting of respondents ages 51 to 56 are added every six years to refresh the sample and keep it approximately representative of the older population. Because the probability of caregiving for a parent peaks in one's 50s, this sample is ideal for our study.

Our analysis focuses on the role of women in providing care, so we limit our sample to women. Because there are likely to be differences in the age at which individuals provide care that may be correlated with their sociodemographic group (e.g., due to variation between groups in the health and longevity of parents or the age difference between parents and their adult children), we seek to maximize the age span over which we observe our respondents, while maintaining an approximately representative national sample and allowing for multiple observations per respondent. Specifically, we require that respondents be interviewed at least once between the ages of 50 and 57, and we take the observation within that interval that is nearest to age 51 as our starting point regardless of the year in which that interview occurs.[5] We then examine patterns of caregiving over the subsequent six interview dates, requiring that all respondents in our sample be observed for this complete window of time. Because the survey is fielded biennially and asks about

[4] We use weights in our descriptive statistics but do not use weights in the regression analyses.
[5] Our "first" interviews range from 1992 to 2004. The modal year is 1992 and the median is 1994.

care since the previous interview, we observe our respondents for approximately ten years after the first interview, with respondents followed until they are approximately ages 60-67.[6]

Caregiving in our sample is defined as answering "yes" to the question:

Did you (or your husband / wife / partner) spend a total of 100 or more hours (since the previous wave / in the last two years) helping your (parents / mother / father) with basic personal activities like dressing, eating and bathing?

Follow-up questions ask who provided the care and the number of hours. We include caregiving provided to either the respondent's own parents or to her parents-in-law.[7] In the discussion that follows, we define individuals who provide care at any point during our window of observation as caregivers, and we distinguish these caregivers from the remaining women in our sample who we do not observe providing care during the sample period. For those respondents who were initially providing care, we do not know when caregiving commenced or their labor market status prior to the provision of care. When we exclude these women, our conclusions are substantially unchanged. Finally, because our interest is in the distribution of caregiving across the population and its impact on the employment of older women in the U.S., we intentionally do not limit our sample to the subset women who had living parents or parents-in-law during the sample period.

Section 3: Descriptive Results on the Distribution and Cost of Caregiving

Section 3.1: Who is more likely to be caring for parents or parents-in-law?

[6] If individuals in our sample miss an interview but are re-contacted at the next interview, we keep them in our sample as long as we have six full interviews for them. Our results are qualitatively unchanged if we follow respondents for as long as they remained in the data or if we use fewer observations per person.

[7] The first wave of the HRS, fielded in 1992, asked about assistance provided in the preceding 12 months while later interviews asked about care in the time elapsed since the previous interview, a period of approximately two years. We do not make any adjustments for the different time period covered by the first interview.

As the descriptive statistics in Table 1 show, individuals who are caregivers at some point during the sample period tend to be more advantaged than those who never report providing care. Nearly a third (31%) of our sample provides care at some point, and care commences, on average, around age 53.[8] At the beginning of our period of observation, compared to non-caregivers, caregivers are significantly younger, more likely to be married, more educated, and in better health. On the financial front, caregivers have significantly greater household wealth and household income, are more likely to have an employed spouse (conditional on being married), and the earnings of any employed spouses are greater. The differences in household wealth are large, with caregivers averaging approximately 13 percent more total wealth: $434,925 (in 2014 dollars) versus $383,824 for non-caregivers.[9] There are smaller differences by race and ethnicity, with white women more likely than non-white or Hispanic women to be caregivers; these differences are not significantly different from zero but are consistent with caregivers tending to have more advantaged backgrounds.

Figure 1 provides further detail on some of the associations between caregiving, SES, and race/ethnicity. The results indicate that differences in rates of caregiving are very large between socioeconomic groups, as measured by educational attainment or household wealth, and smaller by race and ethnicity. The first panel shows that the probability of caregiving increases strongly with education. About 23 percent of women with less than a high school diploma provide care,

[8] If care is reported at the first interview, we use the age at that time. We do not know if the respondent provided care at some point earlier in her life and ceased doing so before the first interview, or the age at which care commenced for those initially providing care. In not observing care prior to the survey, we necessarily miss care given to parents whose deaths preceded the individual's first interview. In addition, our measure of care excludes care provided to grandparents—although such care is far less common than care to parents. Finally, we intentionally omit care to spouses because much spousal care occurs after traditional retirement ages and is thus unlikely to affect labor market behavior. (For statistics on spousal care in the HRS, see Fahle and McGarry 2018.)

[9] Differences in other components of wealth are similarly large. The difference in financial wealth—which excludes real estate and business wealth, among other categories—is 28 percent, or $124,190 versus 96,650 (not shown).

compared to about 36 percent of those with college degrees. The second panel shows a similar gradient by wealth. Those in the lowest quartile are the least likely to provide care, while there is little difference among the other three quartiles.[10] The third panel shows that non-Hispanic white women are more likely to provide care (31.5 percent) than non-white or Hispanic women (approximately 29 percent), but these differences are much smaller in absolute terms than the differences by education and wealth.

Table 2 indicates that, in addition to belonging to more advantaged sociodemographic groups, caregivers also have stronger labor market attachment than do non-caregivers. There is no difference between the groups in employment status (working 0/1) at the first interview, and full-time work shows greater participation by caregivers than non-caregivers, although this difference is not significantly different from zero. However, conditional on working, caregivers work significantly more hours and have significantly greater earnings, $42,407 versus $38,416. These differences in labor market attachment appear to be long-term in nature. Caregivers have significantly more labor market experience and greater tenure on both their current job and on their longest job. Caregivers can also anticipate receiving greater Social Security payments at full retirement age, based on a measure of expected Social Security wealth available from the University of Michigan public-use files. Because Social Security benefits are a function of lifetime earnings, this measure captures well the lifetime employment history of respondents.

Perhaps unsurprisingly given their greater work experience and earnings, Table 2 also suggests that other dimensions of job quality are at least as good for caregivers as for non-caregivers. Caregivers are significantly more likely to have jobs with pension benefits, and

[10] We use wealth rather than income because income is more strongly associated with current labor market behavior, which itself may be affected by caregiving.

although the differences are not significantly different from zero, they appear to have a slightly greater number of vacation and sick days. To the extent that caregiving causes these women to quit their jobs, they will be leaving positions at least as attractive as those held by their non-caregiving peers.

Why might these patterns exist? Table 3 provides some indication. Overall, caregivers are simply at greater risk of needing to provide care. Caregivers have significantly more living parents than non-caregivers, an average of 1.8 versus 1.1, as well as a greater likelihood of having an unmarried parent (who would not have a spouse on whom they could rely for help). Caregivers' parents tend to be older than the parents of non-caregivers: the age of the oldest parent as measured at the respondent's first included interview is 81.1 for caregivers and 78.6 for non-caregivers. There are similarly large and significant differences in having a parent who lives within 10 miles, and in having a parent who is worse-off financially than the respondent herself.[11] Non-caregivers are also twice as likely as caregivers to have at least one parent or parent-in-law living in another country. This is especially likely to be the case for many Hispanic respondents, making hands-on care difficult if not impossible.[12] Not only do caregivers appear to be better-off than their non-caregiving counterparts, but their parents may be better-off as well. Both the mothers and fathers of caregivers have more years of education than the parents of non-caregivers, though how this fact might affect the need for care is ambiguous.

In terms of potential substitutes for care, caregivers have significantly fewer sisters or sisters-in-law than non-caregivers, but there are no differences in the number of brothers or

[11] The HRS does not ask about the income or wealth of parents, just whether the respondent believes that her parents are worse-off or better-off than the respondent herself.

[12] In our sample, approximately one-third of Hispanic women report having at least one living parent in another country at some point in the survey.

brothers-in-law. These figures suggest that sisters may substitute as caregivers while brothers typically do not.

Recognizing that many of the correlates of caregiving in Table 3 are also likely to be associated with the sociodemographic group to which one belongs, we next examine whether between-group differences in these factors can explain the higher rates of caregiving among relatively more advantaged women that we document above. For this task, we utilize the framework of a multivariate regression to calculate the partial correlations between caregiving and each of the variables in Tables 1-3 while controlling for all of the remaining variables.

The results (not shown) indicate that, with a few exceptions, many of the correlations documented above are robust to conditioning on other individual and household characteristics. Family structure remains a key predictor of caregiving: having more living parents or parents-in-law, more unmarried parents, older parents, and parents living nearby are all correlated with a significantly greater probability of providing care, while sisters are associated with a significantly lower probability. There remains no relationship between caregiving and the number of brothers.

In an interesting contrast to the simple correlations in Table 1, the multivariate regression results reveal a reversal of the associations between caregiving and race/ethnicity. Conditional on family structure and the other variables in Tables 1-3, non-white non-Hispanic women are significantly *more* likely than white or Hispanic women to provide care, and the difference in rates of caregiving between the latter two groups disappears. These shifts suggest that the small racial/ethnic differences that we observe at the population level are in large part a result of the fact that non-Hispanic white women are more likely than other groups to have parents in need of care.

Conversely, even after accounting for between-group differences in family characteristics, we continue to see that labor force attachment and some measures of SES are positively associated with caregiving. Respondents with more work experience, those who are currently employed, and those with higher levels of education are more likely to provide care than those who have fewer years of work experience, those who are not employed, and those with lower levels of education. These results challenge the received wisdom among economists that caregivers are likely to be drawn from those with weaker attachment to the labor force, for whom caregiving is likely to be easier and less costly than it would be for those who have a full-time job. Similarly, among those who are working, the financial cost of a reduction in hours worked, measured in dollar terms of foregone earnings, is largest for those with the highest wage. The partial correlations described above and the descriptive results in Tables 1-2 seem to belie this idea. Instead, the consistently better financial status of caregivers suggests that they may have come to their role because they have the financial wherewithal to manage the responsibilities of caregiving while providing for themselves and their families. Among those who are working, it is likely that more advantaged women have jobs which afford them greater flexibility to take time off to provide care.[13]

Section 3.2: Hours of care

The effect of caregiving on a woman's labor force participation is likely to depend on how much time she spends on it. In Table 4, we highlight some statistics on the total number of hours of care provided among those providing at least some care. For these statistics, we first aggregate the hours reported by each individual over all of their six interviews. (Recall that hours of care in

[13] Ideally, we would like to have some measure of the flexibility of hours on the job. The HRS asks respondents whether they can reduce hours on their job, but does not ask whether they have flexibility in when the hours are worked. Many white-collar jobs have a workload that does not allow for a reduction in hours, but may allow a great deal of flexibility, including the option to work from home.

the HRS survey are measured over the time between interviews, a period of approximately two years.) The average cumulative number of hours of care across interviews is 1,359. The median, 504 hours, is substantially smaller. This skewness is due to the long right tail of the distribution: some respondents who co-reside with a care recipient report giving care 24 hours per day. Unfortunately, while we know the total number of hours of care provided between one interview and the next, we do not know when that care was provided; it could represent a few intense months of caregiving or caregiving spread out over a two-year period. The most we can say in this regard is that the average number of interviews at which some care was reported is 1.7. Given a two-year gap between most interviews, this corresponds to 3.4 years or 177 weeks.[14] This back-of-the-envelope calculation thus suggests an average of close to eight hours per week if care were spread uniformly over the period. This is certainly substantial enough to affect labor market behavior.

A breakdown of caregiving hours by sociodemographic group reveals that, while more advantaged women are more likely than less advantaged women to provide *some* care for parents or parents-in-law, less advantaged caregivers are more likely to provide time-intensive care. These patterns can be seen in Figure 2, which presents the distributions of hours separately by education, wealth, and race and ethnicity. The bars show the mean, median, and 90th percentile of the number of hours of care for those providing a positive amount.

Considering differences first by SES, we find that those with the least education provide the greatest number of hours. Although the medians are similar between education groups, the distributions are much more right-skewed for the least educated. For example, the 90th percentile of hours among those with less than a high school degree is a striking 5,000 hours, compared to

[14] Statistics from the Bureau of Labor Statistics (BLS, 2018) show that just over one-half of all women who provide care do so for less than two years, a number consistent with the patterns reported here.

2,900 for those with a college degree. To put these figures in perspective, 5,000 hours of care amounts to 28 hours per week using the average number of weeks shown above. In contrast to the results by education, there is less variation across wealth quartiles and little, if any, discernible pattern.

The patterns by race and ethnicity are similar to those by education. White women report providing fewer hours, with lower means, medians, and 90th percentiles than the other groups. Hispanic women provide the greatest amount of care, as demonstrated by the very high value for the 90th percentile, approximately 5,000 hours, of their distribution. In results not shown, we also find that Hispanic women provide care for more waves on average (1.81) than white non-Hispanic women (1.64) or non-white non-Hispanic women (1.65).

Section 3.3 The cost of replacing family care with paid care

The high cost of formal care is likely to be a major factor in families' decisions about caregiving. While roughly equal fractions of older adults say they prefer care from family members and care from formal caregivers (Brown et al., 2012), formal care comes with a steep cash outlay. Using the average hourly wage for a home health aide in 2014 (Genworth, 2015) of $20, we can estimate the cost of replacing family care with paid help. We then take the ratio of this replacement cost to caregivers' annual family income and average within each of our demographic groups.

The results, seen in Figure 3, reveal large disparities between groups in the relative financial burden of replacing family care with paid care measured in terms of the fraction of family income it represents. By this measure, formal care is far more "costly" for less educated and lower wealth groups, with prohibitively high replacement costs for those with fewer resources. For those with assets above the median (those in the upper two wealth quartiles), the cost of formal care is

equivalent to approximately 10 percent of family income. While large, such an expense may be possible to maintain for a year or two. In contrast, for those with incomes below the median, the cash cost of formal care would be nearly 40 percent of family income. Similar differences are evident by race and ethnicity with costs ranging from 37 percent for Hispanic families, 30 percent for non-white non-Hispanic families, and 13 percent for non-Hispanic white families. These results suggest that women from disadvantaged sociodemographic groups are providing care partly because they have no other options.

The analysis to this point reveals a complex picture of the sociodemographic patterns of caregiving. While more socioeconomically advantaged women are more likely to provide care, women from less advantaged economic and racial and ethnic groups tend to provide more time-intensive care, care that has a much higher economic value when measured as a percentage of their household income. These disparities, as well as differences across groups in other economic resources and job characteristics, are likely to shape the extent to which these women are negatively impacted by providing needed care.

Section 4: The Relationship between caregiving and work

Much prior research has shown that, compared to non-caregivers, caregivers are less likely to be employed and tend to work fewer hours if they are employed (e.g., Van Houtven et al. 2013, Johnson and Lo Sasso 2006). We now examine this relationship for the women in our sample. To better isolate the causal effect of care on work, we limit the sample here to those who were not initially providing care. We further limit our sample to those who are "at risk" for providing care

in that they have a living parent or parent-in-law at the second observation in our sample of six interviews, and could thus potentially face the need to provide care.

We estimate the relationship between work, hours worked, and earnings as functions of caregiving and a number of standard control variables.[15] Both hours worked and earnings are measured unconditionally. For each dependent variable, we estimate both an ordinary least squares (OLS) regression and a fixed-effects model that leverages the multiple observations we have for each respondent. The OLS model compares observably similar caregivers and non-caregivers; the fixed-effects model compares women to their earlier or later selves, examining how women's labor force participation changes when their caregiving status changes.

Across all three outcomes and both types of empirical specifications, we find that caregiving has a significant and negative effect on work. The results appear in Table 3, Panel A. In the OLS model, caregiving reduces the probability of working by 4 percentage points on a base of 58 percent, or 7 percent. The effect falls by half when controlling for fixed effects, but it is still substantial, with a reduction of 2.2 percentage points, or 3.7 percent. In terms of hours worked, caregiving again has a significant negative effect, equivalent to 2 hours per week in OLS, or 9.5 percent, and 1.2 hours in the fixed-effects model. Finally, caregiving is found to be associated with a reduction of $2,104 in annual earnings in OLS, and $915 in the fixed-effects model. Thus, among those not caregiving when first observed, the take-up of caregiving is associated with significantly reduced labor market behavior.

[15] In addition to the variable for "caregiving," the regressions include: age, race and ethnicity, categorical measures of education, marital status, number of living parents, number of own children, household wealth, spousal employment and earnings (if married), health status, and job characteristics (pension, health insurance, years of experience) for those employed.

The consequences of caregiving for a woman's financial security in retirement depend in part on whether her reduced labor force participation is temporary or long-lasting. As noted earlier, the average number of interviews at which care is reported is 1.7. If caregivers return to work after this period of providing assistance, they may be able to recoup some of their lost earnings or at least improve their financial picture in retirement. To assess the extent to which any labor market effects are "permanent," we examine work outcomes near the end of the traditional work life. Specifically, we look at the same collection of labor market outcomes measured at age 65. For each respondent, we select the observation that is closest to age 65. We require that the individual be at least 63 to avoid the large difference by age in employment at this point in the lifecycle.[16] We compare women who cared for a parent or parent-in-law at any point over the 10-year window of observation to those who were never caregivers. Because we have only one observation per respondent, we cannot undertake a fixed-effects analysis.

As is apparent from the results, which appear in Table 3, Panel B, we see strong and statistically significant negative relationships between caregiving and various long-term measures of work, with results that are similar in magnitude to the short-term effects. Ever caregiving is associated with a 6.2 percentage point reduction in the probability of working at age 65, or a 15 percent reduction. There is a decline of almost two hours per week in hours worked—very similar to that observed for the short term, although smaller in percentage terms. Finally, the negative relationship between care and earnings is again similar to the short-term, with caregiving at any point over the 10-year window of observation associated with a decline of nearly $1,800 in annual earnings.

[16] The very youngest in our sample thus do not contribute to these regressions.

Caregiving thus appears to have potentially significant negative effects on average employment in both the short and long term.[17] Interestingly, the relationship between caregiving and long-term employment is quite consistent across sociodemographic groups, as Figure 4 shows. Despite the differences across groups in the probability of providing care shown in the earlier figures and the expected differences in resources and job opportunities, within each group defined by education, wealth, or race/ethnicity, caregivers are less likely to be employed at age 65 than non-caregivers. Regardless of the demographic group, caregiving is associated with a reduction in work in the later years.

Section 5: Conclusions

This chapter provides a detailed look at the relationship between caregiving and work, with a focus on the different patterns observed by educational attainment, wealth, and race/ethnicity. Perhaps surprisingly to many readers, the results provide clear evidence that caregivers are not disproportionately drawn from those with weaker attachment to the labor market. Rather, those women who provide care to a parent or parent-in-law tend to have higher earnings, more labor market experience, more education, and greater financial resources than non-caregivers.

We find that one of the most powerful predictors of care is family composition. A larger number of living parents increases the risk of having to provide care, particularly if the parent or parent-in-law is unmarried and thus does not have a spouse who can provide care. Because more advantaged adults tend to live longer, middle-aged women with higher socioeconomic status are

[17] Approximately 7.7 percent of our sample is providing care at the "age 65" observation. If we exclude these women from our regression sample, the results are similar and still significantly different from zero. The magnitude of the coefficients on caregiving in the regressions for working (0/1), hours and earnings change from -0.062 to -0.055, -1.9 to -1.7, and -1766 to -2152, respectively.

more likely than lower-SES women to have parents or parents-in-law who are still alive and thus at risk of needing care. In this sense, the gradient of eldercare – in which more advantaged women are at higher risk – runs in the opposite direction of most of the inequalities discussed in this book. Women with greater resources in terms of education, work experience, and family wealth may be in a better position to care for their parents or parents-in-law. It is also plausible that their jobs offer more benefits and flexibility that improve their availability to provide care.

However, some of the disadvantages of caregiving for labor force participation fall disproportionately on women with fewer resources. While women with lower levels of education and non-white women are actually less likely than more highly educated women and white women to provide care during our window of observation, those who are caregivers provide more hours of care, particularly in the extreme upper-end of the distribution. Moreover, in assessing the value of the care provided relative to income, those with fewer resources are faced with an average replacement cost that represents over one-third of their annual household income, suggesting that they are likely to be unable to afford to purchase substitute care. Finally, because the parents of women with fewer resources are similarly likely to be of less advantaged sociodemographic groups, they are likely to be in poorer health for much of their lives and may need greater care, albeit at a younger age. We are restricted by the data from examining caregiving earlier in the lives of our respondents, but they may have indeed provided care as early as their 40s.

Importantly, this chapter is among the first to show that caregiving appears to have long-term consequences on work. We find a strongly significant and negative association between ever providing care to a parent or parent-in-law and being employed at age 65. Moreover, the effects of caregiving on long-term employment appear to be remarkably consistent across groups defined by

education, wealth, and race/ethnicity. Caregiving is associated with a reduced likelihood of working longer among women from all sociodemographic backgrounds.

We close by exploring what our results could portend for the future of eldercare in the U.S. and its impact on the work lives of older American women. To begin with, there are several reasons to expect that the burden of care will increase for future cohorts. First, the aging of the U.S. population and increases in life expectancy are likely to increase the demand for care. As individuals survive to later ages and face changing mortality risk from various causes, they may also spend more time in need of custodial care. Indeed, the U.S. Centers for Disease Control and Prevention forecasts that the share of the U.S. population with Alzheimer's disease and related dementias will rise from 1.6 percent in 2014 to 3.3 in 2060, with the fastest increases occurring within minority populations (Matthews et al., 2019). Caring for those with cognitive issues is likely to be particularly time-intensive and may lead to even greater negative effects on work than those shown here. Second, these same forces, combined with higher rates of divorce and smaller family sizes, will reduce the supply of potential caregivers. The American Association of Retired Persons predicts that these supply-and-demand factors will reduce the caregiver support ratio—the ratio of the population ages 45 to 64 to the population ages 80 and older—from 7.2 in 2010 to just 2.9 by 2050 (Redfoot et al., 2013). Thus, the burden of caregiving is potentially poised to become both larger and more concentrated, and because caregiving is highly gendered, the growing burden is likely to fall disproportionately on women. Our results suggest that these demographic changes may intensify the challenges of combining caregiving and paid employment for upcoming generations.

Coupled with these important demographic changes, are likely longer-term changes in work patterns and other behaviors accelerated by the COVID-19 pandemic. The high infection

rates in nursing facilities may lead families to eschew institutionalization for elderly relatives and, instead, may assume the burden of this care themselves. Meanwhile, if the increased prevalence in "working from home" or telecommuting continues, individuals may have more flexibility in when and where work is performed and be better able to balance work and care. How these changes will impact the relationship between caregiving and work is an important question for future research.

The role of public policy in managing these trends remains one of the largest question marks on the horizon. On the one hand, if concerns over fiscal deficits trigger a retrenchment of government spending, the result could be the paring back of a safety net that was already porous to begin with in its coverage of long-term care. Such a reaction could put more pressure on families to provide care and exacerbate existing inequalities in the burden providing care. On the other hand, for many, it has also become increasingly clear that the United States has an inadequate infrastructure for providing care, leading to renewed calls for reform and for expanded public provision of these services. How this debate will unfold in the coming years remains to be seen.

In light of the many challenges, we end by stressing that the importance of caregiving is only likely to grow in the future and by calling for more research in this critical area.

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Table 1. Demographic and Financial Characteristics

	ALL (n=5,834)		Ever Care (n=1,705)		Never Care (n=4,129)	
	Mean	SE	Mean	SE	Mean	SE
Demographic Characteristics:						
Ever Provided Caregiving 0/1	0.31***	0.006	1.00	0.00	0.00	0.00
Age	52.54***	0.027	52.28	0.048	52.65	0.033
Married 0/1	0.71***	0.006	0.74	0.011	0.69	0.007
Years of Schooling	12.97***	0.037	13.33	0.065	12.82	0.045
Number of Children	2.90	0.025	2.86	0.044	2.92	0.029
Non-white and Non-Hispanic 0/1	0.14	0.004	0.13	0.008	0.14	0.005
Hispanic 0/1	0.07	0.003	0.07	0.006	0.08	0.004
Fair/poor Health 0/1	0.19***	0.005	0.18	0.009	0.20	0.006
Household Financial Characteristics:						
Household Income (2010 dollars)	95,034**	1,464	99,846	2,518	92,866	1,793
Household wealth (2010 dollars)	399,724**	11,108	434,925	22,679	383,824	12,528
Median wealth	166,273	--	189,893	--	155,387	--
Husband works (if married)	0.82***	0.006	0.84	0.011	0.81	0.008
Husband's earning (if working)	71,920*	1,384	75,337	2,751	70,247	1,571

Stars indicate if the difference between the ever and never care groups are significant at the *** 1, ** 5 or *10 percent level. The sample is all those observed at least once between the ages of 50 and 57 and interviewed at least 6 times after the first such observation. The statistics in the table are computed using data from each individual's first interview and are weighted to be nationally representative.

Table 2. Labor Market Characteristics

	ALL (n=5,834)		Ever Care (n=1,705)		Never Care (n=4,129)	
	Mean	SE	Mean	SE	Mean	SE
Labor Market Participation:						
Working 0/1	0.72	0.006	0.72	0.011	0.72	0.007
Work Full-time 0/1	0.59	0.006	0.60	0.012	0.58	0.008
Work Part-time 0/1	0.12	0.004	0.11	0.008	0.12	0.005
Hours (if working)	38.23***	0.204	39.17	0.388	37.81	0.24
Earnings (if working)	39,679***	588	42,407	1,115	38,416	688
Experience (years)	24.13*	0.148	24.51	0.266	23.96	0.177
Tenure in Current Job (years)	11.02***	0.152	11.86	0.290	10.65	0.178
Tenure in Longest Job (years)	17.58***	0.136	18.40	0.251	17.21	0.162
Expected Social Security Wealth at Full Retirement Age (2010 dollars)	86,369***	693	89,182	1,306	85,067	816
Job Quality:						
Pension on Current Job	0.59***	0.008	0.63	0.014	0.57	0.009
Health Insurance on Current Job	0.58	0.008	0.59	0.014	0.58	0.009
Vacation Days	14.23	0.342	14.77	0.623	14.00	0.410
Sick Days	9.21	0.426	9.80	0.879	8.93	0.476

Stars indicate if the difference between the ever and never care groups are significant at the *** 1, ** 5 or *10 percent level. The sample is all those observed at least once between the ages of 50 and 57 and interviewed at least 6 times after the first such observation. The statistics in the table are computed using data from each individual's first interview and are weighted to be nationally representative.

Table 3. Family Characteristics

	ALL (n=5,834)		Ever Care (n=1,705)		Never Care (n=4,129)	
	Mean	SE	Mean	SE	Mean	SE
Measures of Caregiving Risk:						
Number of Living Parents / In-laws	1.31***	0.013	1.73	0.021	1.12	0.016
Any Unmarried Parent / In-law (0/1)	0.57***	0.006	0.76	0.010	0.49	0.008
Age of Oldest living parent / in-law	79.57***	0.147	81.13	0.141	78.55	0.221
Any Parent living within 10 miles	0.13***	0.005	0.17	0.009	0.11	0.006
Any parent worse-off than respondent	0.44***	0.007	0.47	0.012	0.42	0.009
Any parent living abroad	0.06***	0.004	0.04	0.005	0.08	0.005
Father's education (years)	10.01***	0.056	10.25	0.100	9.90	0.068
Mother's education (years)	10.25***	0.049	10.52	0.087	10.13	0.060
Spouse's father's education (years)	9.37	0.075	9.17	0.142	9.33	0.091
Spouse's mother's education (years)	9.66	0.066	9.76	0.124	9.62	0.080
Siblings:						
Number of Sisters	1.60***	0.021	1.50	0.037	1.64	0.026
Number of Brothers	1.50	0.019	1.48	0.034	1.50	0.023
Number of Sisters-in-law (if married)	1.49***	0.024	1.38	0.034	1.54	0.030
Number of Brothers-in-law (if married)	1.43	0.023	1.41	0.042	1.43	0.028

Stars indicate if the difference between the ever and never care groups are significant at the *** 1, ** 5 or *10 percent level. The sample is all those observed at least once between the ages of 50 and 57 and interviewed at least 6 times after first such observation. The statistics in the table are computed using data from each individual's first interview and are weighted to be nationally representative.

Table 4. Time spent providing care among women ever providing care (N=1,705)

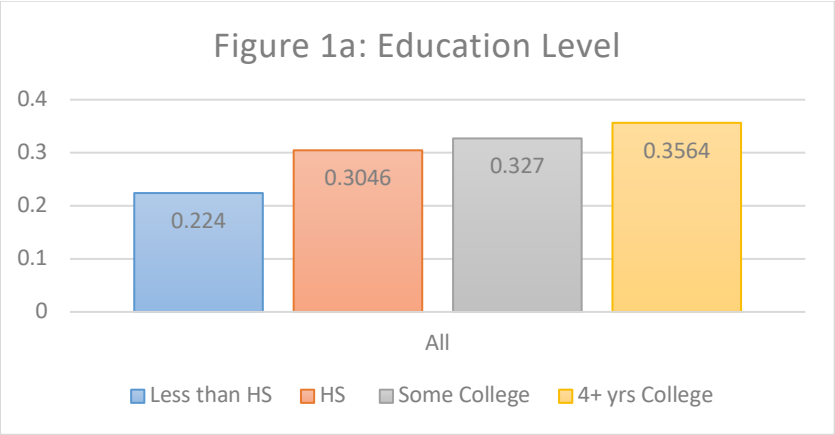
	Mean	Std Err
Total hours of care provided over period of observation (approx. 10 years)	1359	54.6
25th percentile	200	--
50th percentile	504	--
75th percentile	1552	--
90th percentile	3500	--
Age at first reported caregiving	56.2	0.09
Number of interviews at which reported caregiving	1.67	0.02

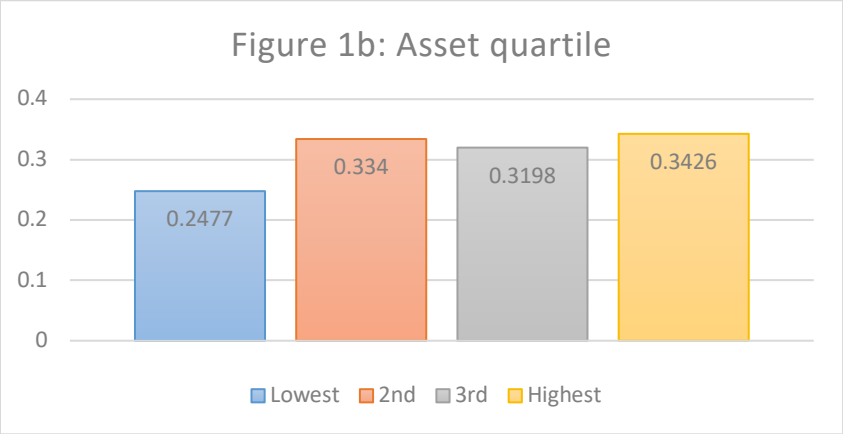
Table 5: Relationship Between Caregiving and Work

	Work (0/1)		Hours		Earnings	
	OLS	Fixed Effects	OLS	Fixed Effects	OLS	Fixed Effects
A. Current work outcomes						
Caregiving	-0.040***	-0.022***	-2.01***	-1.17***	-2104***	-915***
	(0.012)	(0.010)	(0.482)	(0.381)	(7621)	(645)
Observations	19,521		19,370		19,521	
Mean of Dep Var	0.58		21.0		19,935	
B. Work outcomes at age 65						
Caregiving ever	-0.062***	--	-1.90***	--	-1766***	--
	(0.018)		(0.670)		(681)	
Observations	3,678		3,635		3,678	
Mean of Dep Var	0.425		13.5		11,964	

***p<0.01, **p<0.05, *p<0.10. In addition to the measure of "caregiving", the regressions in the top panel include age, race / ethnicity, categorical measures of schooling, marital status, number of living parents, number of own children, age of youngest child, household wealth, spousal employment and earnings (if married), health status, and job characteristics measured at the first observation (employment, pension, health insurance, years of experience). The first observation is omitted from the regressions. In the bottom panel the regressors are similar but are measured at the first interview.

Figure 1. Proportion of women providing care to parents or parents-in-law





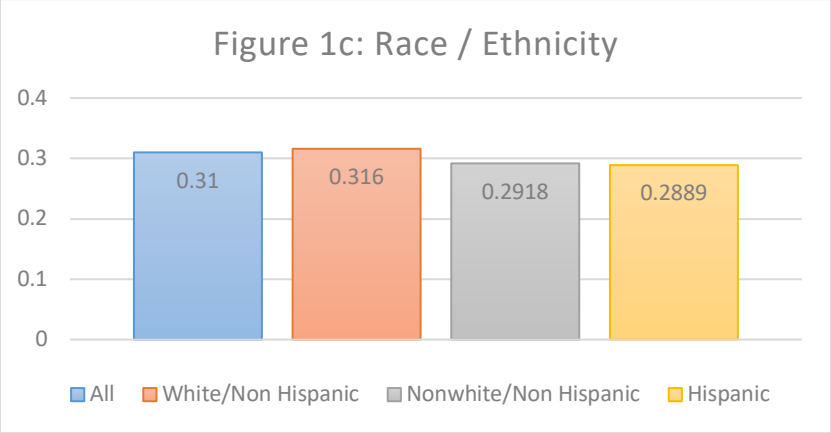
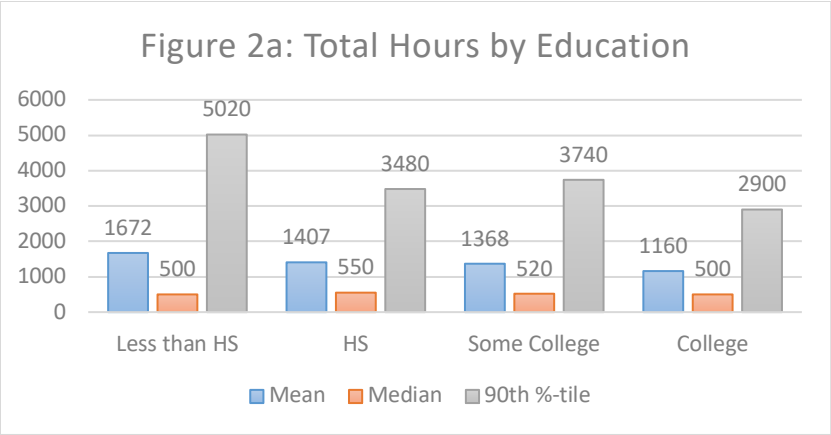
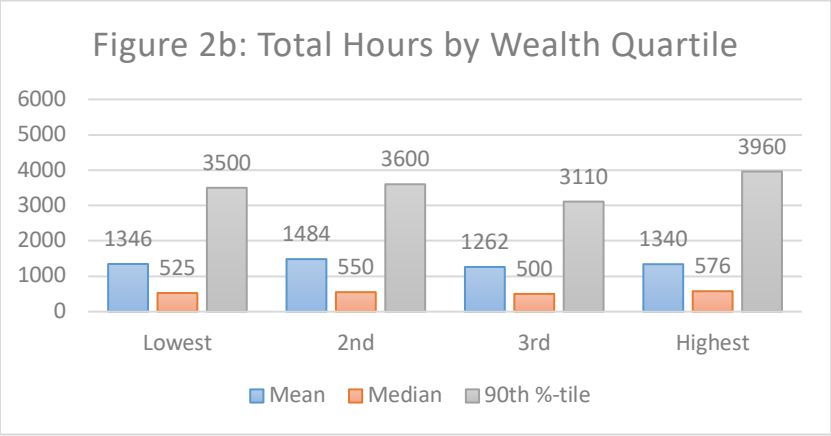


Figure 2. Cumulative hours of care across interviews





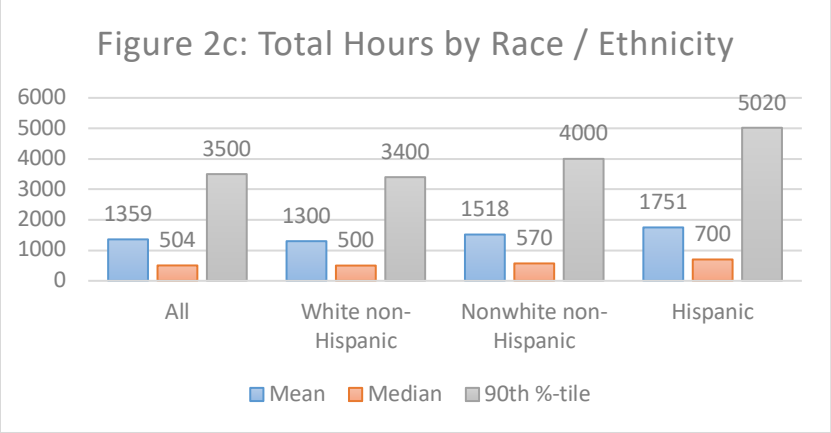
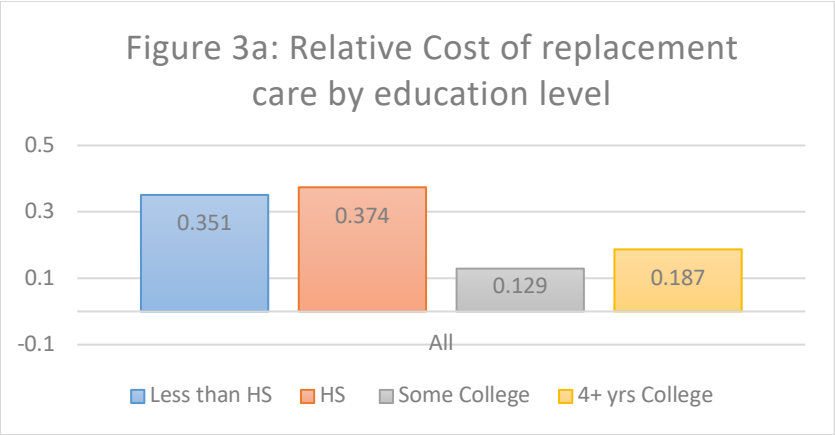
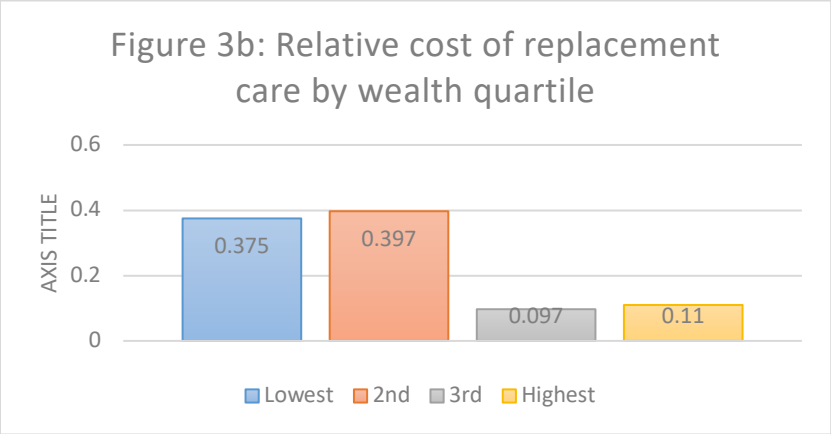


Figure 3. Relative cost of replacement care





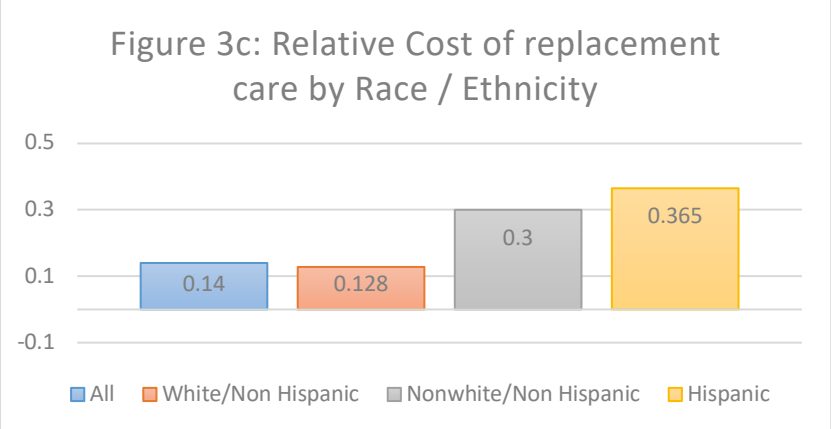


Figure 4. Proportion of women working at age 65