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Living arrangements and food insufficiency among seniors

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Abstract

This study investigates recent trends in living arrangements among older Americans and how they relate to nutrition assistance program participation and food insufficiency. We specifically focus on the rising propensity for older adults to live with children under 18 and the decline in living in institutions. We find that both of these living arrangements are associated with SNAP participation and with patterns of food insufficiency. Using an event study design, we find suggestive evidence that living in an institution may alleviate food insufficiency. Seniors living with children under 18 appear to have rising rates of food insufficiency even before the period of co-residence, suggesting that other factors may be driving both food hardship and living arrangements.

Executive Summary

The U.S. population is aging rapidly. By 2050, the population aged 65 and up will nearly double to 88 million. Understanding the social, demographic, and policy trends that affect food insufficiency among seniors is critical for mitigating hardship and allocating safety net supports where they will do the most good. Here we focus on living arrangements for Americans aged 60 and older, which may have important implications for food-related hardship and program participation and which are changing substantially over time.

Two trends in the living arrangements of seniors stand out. The first is a recent increase in the probability that adults over age 60 live with children under age 18, typically grandparents living with their grandchildren or older parents living with their own children. In 2000, 6.7 percent of seniors lived with children; that number was 7.3 percent in 2019. Grandparent-grandchild households have elevated rates of food insufficiency relative to senior households without grandchildren, and the presence of grandchildren could impact eligibility for and participation in the Supplemental Nutrition Assistance Program (SNAP). Thus, meaningful changes in the household composition of the elderly could have implications for food security, SNAP eligibility, and program participation.

A second notable trend is the decrease in age-adjusted institutionalization rates among older Americans. Though the institutionalized population is rising overall with the increasing number of elderly individuals, seniors are substantially less likely to be living in an institution at any given age than they were two decades ago. This is partially due to aggressive policy efforts underway since the 1999 *Olmstead* Supreme Court decision to move towards home-based care for individuals living with disabilities. Though living outside of an institutional setting often has benefits, one unintended consequence may be that older Americans with disabilities face higher rates of food-related hardships.

This research investigates how senior living arrangements – particularly living with children and living in an institution – correlate with and causally impact food insufficiency and SNAP participation. We use the Census/American Community Survey (ACS) to establish that SNAP participation in senior households is highly correlated with living arrangements: seniors living with children under 18 are much more likely to receive SNAP. This relationship is evident even after restricting to those under 130 percent of the federal poverty line, suggesting the presence of children may facilitate take-up among those eligible. Seniors living in institutional settings are less likely than other groups to participate in the SNAP program.

We use the Health and Retirement Study (HRS) to investigate how patterns of food insufficiency vary based on living arrangements. Exploiting the longitudinal nature of the HRS data set, we implement an event study approach, examining changes in rates of food hardship around the time of living arrangement transitions including the onset of co-residence with grandchildren. We find inconsistent patterns pointing to underlying factors driving both food insufficiency and residential decisions. Using an event study to examine nursing home residence, we find suggestive evidence that living in an institution may alleviate some food-related hardship.

I. Introduction

The U.S. population is aging rapidly. For example, the ratio of 80-to-84-year-olds to 15-to-64-year-olds is expected to more than double between today and the year 2050. By 2050, the population aged 65 and up will nearly double to 88 million. This demographic shift will have implications for the nutritional safety net, but food insufficiency has been less extensively studied among seniors than among other demographic groups (National Academies of Sciences, Engineering, and Medicine 2016). Understanding the social, demographic, and policy trends that affect food insufficiency among older Americans will be critical for mitigating hardship and allocating safety net supports where they will do the most good. Here we examine the consequences of shifting living arrangements among older Americans for food insufficiency, defined as reporting inadequate resources for food in the Health and Retirement Survey as described in more detail below, and Supplemental Nutrition Assistance Program (SNAP) participation.

Increasingly, older adults live with children. Prior research shows that the number of grandparents living with grandchildren rose 22 percent to 7 million between 2000 and 2011, with 2.7 million of those grandparents serving as the primary caregiver (Livingston 2013). Pittman (2015) similarly reports a 50 percent increase in the prevalence of "skip-generation" households (those in which the parent of the child is absent from the household) from 1990 to 2005. As explained below, our research documents some complexity in these patterns, with differential patterns by age of the grandparent and by race/ethnicity. We also show that some of the increase in older adults living with children is driven by older parents or parent figures, rather than grandparents.

Seniors assuming a caregiving role for their children or grandchildren may find their resources stretched and may prioritize feeding the children at the expense of their own consumption. Older Americans may be more likely to qualify for and participate in SNAP when children are present in the household, potentially reducing food hardship, but SNAP resources may be unavailable if grandparents do not have official custody of their grandchildren (Gualtieri 2019).[1,2] Policies promoting food security for low-income seniors must recognize the evolving responsibilities and family structures for this group.

Previous research discusses a number of potential contributing factors for the increase in grandparent caregiving. Researchers have suggested that changes in child welfare policy and policy towards cash assistance played an important role, particularly the Personal Responsibility and Work Opportunity Reconciliation Act of 1996, which by cutting benefits and tightening eligibility requirements made it more difficult for single parents to support their children. At the same time, the legislation required that states consider giving preference to relatives versus non-relative caregivers in determining child placement when children are removed from parents, leading to increases in grandparent caregiving (Smith and Devore 2004, Pittman 2015).

In addition, the opioid epidemic, abuse of other drugs, and increases in female incarceration rates have been linked to increases in grandparent caregiving (Fuller-Thomson, Minkler, and Driver 1997, Hayslip and Kaminski 2005, Minkler and Fuller-Thomson 2005, Park

[1] Entry of a child into the household would increase household size without necessarily increasing income. Since SNAP eligibility is a function of income, household size, and other factors, these household changes could increase likelihood of eligibility.

[2] 7 C.F.R. § 273.1(a) and (b). Subsection (a) states that people under age 22 who live with their parents must apply for SNAP as part of the same household. Subsection (b) states that people under age 18 who live with and are under "parental control" of an adult who is not their parent must apply as the same household.

2006, Pittman 2015). Mandatory minimum sentences for drug offenses led to a tripling of the number of incarcerated mothers (Swann and Sylvester 2006).

Prior evidence suggests that seniors living with grandchildren in the household may face disadvantages. For example, seniors serving as grandparent caregivers or living in multi-generation households are more economically vulnerable than similar families without grandchildren (Pilkauskas and Dunifon 2016, Ziliak and Gundersen 2016, Dunifon 2018). Ziliak and Gundersen (2016) show that households with grandchildren present are more than twice as likely to be below the poverty line, and have rates of food insecurity that are more than twice as high, compared with families with no grandchildren present. Ziliak and Gundersen (2016) also show that households with grandchildren present have rates of SNAP participation four times as high as families without grandchildren, reflecting the higher rates of disadvantage.

Compared to traditional families in which the parent is the primary caregiver, grandparent caregiving families have lower levels of education, higher rates of disability, and are more likely to be black (Ziliak and Gundersen 2016, Fuller-Thomson, Minkler, and Driver 1997). As a result, while the presence of grandchildren may be an important factor affecting economic vulnerability, other factors may be associated with both economic disadvantage and the likelihood of grandchildren to co-reside in the household. Ziliak and Gundersen (2016) use longitudinally linked two-year panels from the Current Population Survey (CPS) from 2001-2010 to study the impact of entry and exit of a grandchild in a household and show that not only is the presence of grandchildren associated with greater risk of food insecurity, but the entry of a grandchild into a household increases the risk. However, the entry of a grandchild appears to

buffer families from the most extreme forms of food insecurity. Thus, the relationship between living with grandchildren and food-related hardship is complex and warrants further attention.

A contemporaneous trend in living arrangements among older Americans is a decline in the propensity to live in institutions at any given age. In addition to changes in health and technology, the trend away from institutions is due in part to significant policy efforts to move the care of the elderly to home-based settings. The landmark 1999 *Olmstead* decision by the Supreme Court obligates states to avoid a bias towards institutionalization of persons with disabilities who are able to live in the community with support (Kaiser Commission on Medicaid and the Uninsured 2000). Since *Olmstead*, many states have Home and Community-Based Services (HCBS) waivers to allow Medicaid to pay for home-based care, with thirty states adopting such waivers between 2011 and 2015 following the Affordable Care Act (Beauregard and Miller 2020). Though surveys suggest the elderly prefer to "age-in-place" (Harrell et al. 2014) and care outside of institutions is less costly (Marek et al. 2012), there are potential unintended consequences of reducing the institutionalization of vulnerable seniors. Institutions such as nursing homes are in a position to alleviate food hardship by providing regular, government-regulated (for nutritional adequacy)[3] meals to seniors who otherwise might lack adequate nutritional resources.

Policy movement towards home-based care may also have implications for SNAP. SNAP benefits are not available to individuals who live in an institution providing a majority of their meals; [4] food costs for the low-income population living in institutions are largely financed by

[3] 42 C.F.R. § 483.60
[4] 7 C.F.R. § 273.1(b)(7)(vi).

the Medicaid program. When Medicaid instead incentivizes seniors to "age in place," it is likely that more seniors will be eligible for and will enroll in SNAP to address their food needs. The shift away from institutional care of the elderly has implications for program outreach as well as the costs borne by SNAP.

Given meaningful recent changes in the living arrangements of older Americans, this research aims to understand the implications of living arrangements for food-related hardship and participation in SNAP. Understanding these links will also shed light on additional outstanding questions in the literature, such as age patterns in food insecurity among seniors and associations between disability and food insecurity (Gundersen and Ziliak 2018).

II. **Data**

The project makes use of two datasets. The Census/American Community Survey (ACS) is a large, nationally representative repeated cross-section of the United States population, including the institutionalized population. We use the 2000 Decennial Census and the 2006-2019 American Community Surveys, omitting 2001-2005 because the ACS does not capture institutionalized individuals in those years.

The Health and Retirement Study (HRS) is a smaller cohort-based longitudinal dataset that follows older Americans every two years starting at age 50, including those who enter institutions. In the HRS data, the sampling frame is based on a complex cohort design, with new birth cohorts being added at regular intervals, and respondent weights make the statistics

nationally representative. All models are weighted using HRS respondent weights, adjusted to address transitions into institutions.[5]

The HRS incorporates food-related questions that, though less extensive than the full 18 question food security scale used in the Current Population Survey, have been used to assess material deprivation among older Americans (Levy 2015). Following Levy (2022), we use the term "food insufficiency" (FI) to refer to the primary measure of food hardship in the HRS, which is a negative response to the question, "In the last two years/Since [month and year of previous interview], have you always had enough money to buy the food you need?" We also examine a second question, "At any time since [month and year of previous interview]/in the last two years, have you skipped meals or eaten less than you felt you should because there was not enough food in the house?" We refer to this binary variable as "eat less".

The HRS also has the advantage that spouses can be tracked even when they live in different locations because one becomes institutionalized, as individuals are tracked when they change residences. Additionally, the household composition of the respondent is tracked, with children and grandchildren of the respondent specifically identified as such. We use the restricted version of the HRS that contains geographical detail and focus on years 2004-2016 for the analysis presented here.

[5] We adjust the weights for the nursing home outcomes because respondents in nursing homes at the time of the survey are given zero weight; following the protocol suggested in section 1.3 in an HRS document on weights (https://hrsonline.isr.umich.edu/sitedocs/wghtdoc.pdf) we assign them their weight in the wave prior to the nursing home event.

III. **Research Methods**

Our project includes two parts: a descriptive component and an event study component.[6] The first part of our project provides several descriptive analyses that will be useful to policy-makers as they plan ahead for the demographic shift. First, we use the Decennial Census and the ACS 1-year samples 2006-2019 to document trends in living arrangements of two groups of seniors: those ages 60 and up as well as a subset ages 80 and up. We explore differences in those trends by race/ethnicity and by age.

We also examine the 2004-2016 waves of the HRS, and describe living arrangements and food insufficiency using a sample ages 55 to 90. The HRS sample size is smaller than that of the ACS, but the longitudinal nature of the HRS allows us to characterize the prevalence and nature of transitions in living arrangements over time.

We use the HRS to examine differences in levels of food-related hardship surrounding transitions in living arrangements. The HRS offers a unique opportunity to examine food hardship among the institutionalized population, which is frequently overlooked in the measurement of food sufficiency. We specifically examine nursing homes here. If food hardship is indeed lower within institutions, this fact suggests a small but systematic bias in the measurement of food-related hardship levels, trends, and differences across demographic groups because of differential and changing institutionalization rates.

We then turn to examining the effects of living arrangements on food hardship and SNAP participation. Using the HRS, we examine transitions – that is, how grandchild entry into

[6] We had previously incorporated an instrumental variables approach into our research, but our initial explorations were not as promising as we had hoped.

senior households affects hardship (similar to Ziliak and Gundersen 2016), and similar effects for senior entry into nursing homes. Examining transitions between residential arrangements allows us to control for unobserved time-invariant factors that could generate bias in a naïve estimate of the relationship between living arrangements and food insufficiency. Nevertheless, time-varying factors could drive both residential decisions and food insufficiency. For example, an increase in housing costs could cause families to consolidate households, and increased expenditure on housing may leave less money for food.

We use an event study approach to analyze the HRS data. The events considered are the first observed incidence of the co-residence of grandchildren under the age of 18 in the household of the HRS respondent and the first observed nursing home stay for a respondent. We estimate regression models of the occurrence of the event as a function of time prior to and following the event, using three leads and three lags, and including demographic controls—a full set of indicators for age, year, gender, race and ethnicity, and in the case of the first observed nursing home stay, marital status. All models are weighted using the HRS respondent weights.[7] We construct the sample to be balanced at time -1 (one wave, or two years prior to observed move) and time 0 to ensure that we observe at least one period before the event being studied.[8] In each case, we plot the coefficients from the model, showing the change in

[7] We adjust the weights for the nursing home outcomes because respondents in nursing homes at the time of the survey are given zero weight; following the protocol suggested in section 1.3 in an HRS document on weights (https://hrsonline.isr.umich.edu/sitedocs/wghtdoc.pdf) we assign them their weight in the wave prior to the nursing home event.

[8] As a result, HRS respondents who begin the sample residing with grandchildren do not contribute to the estimation of the event study models for grandchild co-residence.

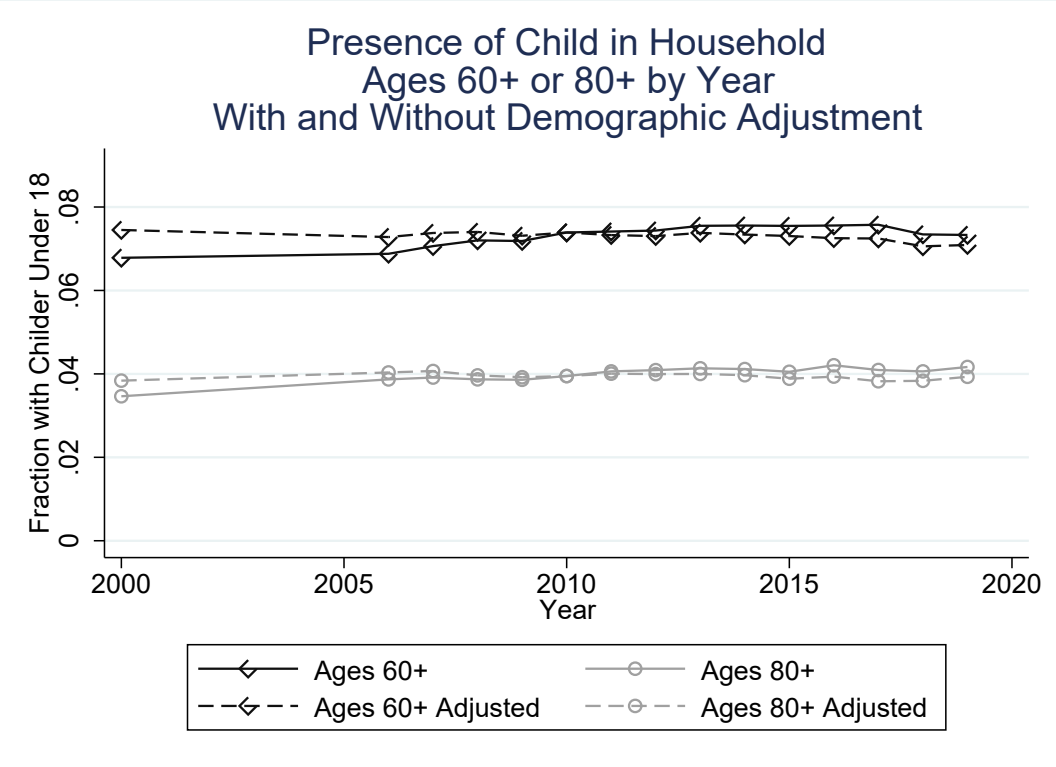
the fraction of respondents with the outcome of interest at that time relative to fraction at the time of the event, controlling for demographics and year.

IV. **Results**

A. ACS trends in living arrangements

We start by exploring how living arrangements have changed over the past two decades using the Decennial Census and American Community Survey. Figure 1 examines the prevalence of older individuals living with children under 18 in the United States. The fraction of those 60 and older as well as those 80 and older living with children, represented by the solid lines, increased between 2000 and 2019, primarily driven by an increase between 2000 and 2010 (Figure 1). These trends were partially driven by demographic changes in the population, as is evidenced by the flatter dashed lines in Figure 1 which hold population characteristics (age, sex, and race/ethnicity) fixed at their 2010 levels.

Figure 1.

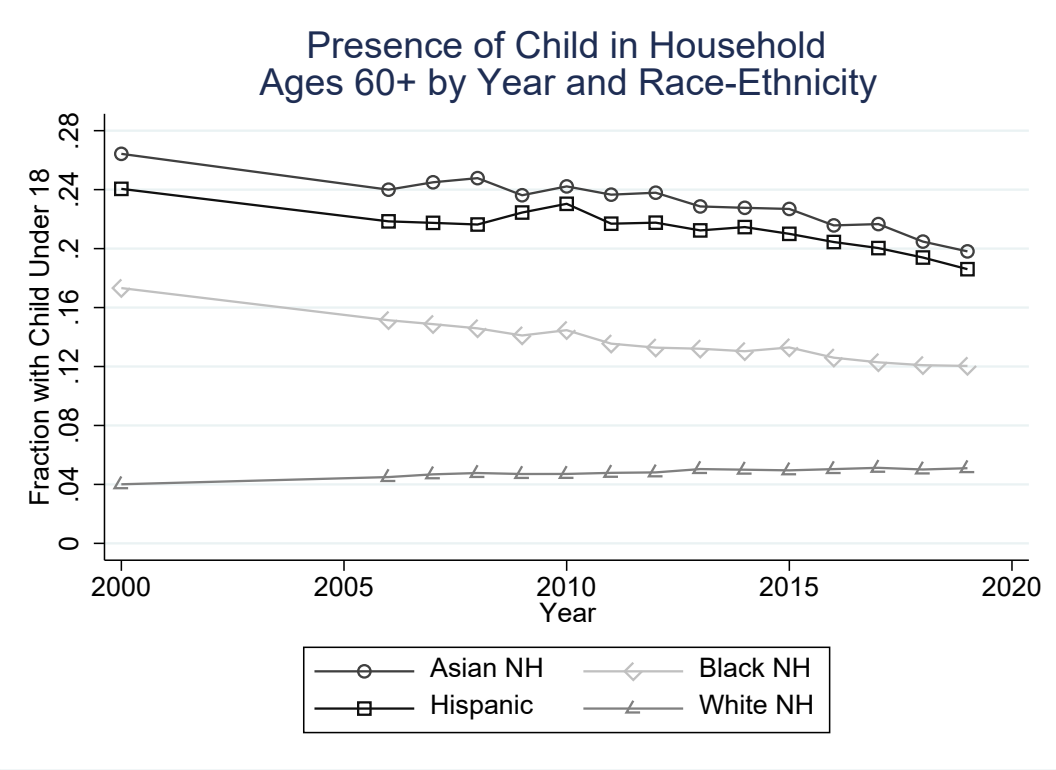


Data Source: 2000 Census, 2006-2019 American Community Surveys. Note: "Adjusted" means the distribution of age, race/ethnicity, and sex are fixed at the 2010 population distribution for those ages 60 and up or 80 and up.

We consider two demographic characteristics for further examination. First, Figure 2 examines trends in the propensity to live with children under 18 by race/ethnicity, focusing on four groups: non-Hispanic whites, non-Hispanic blacks, non-Hispanic Asians, and Hispanic-identifying individuals. There are significant differences by race/ethnicity in the propensity to live with children as well as differential trends over time. Specifically, older non-Hispanic white individuals are substantially less likely to live with children than other major race/ethnicity

groups. At the same time, older non-Hispanic whites are becoming slightly more likely to live with children over time, while the opposite is true for other racial/ethnic groups.

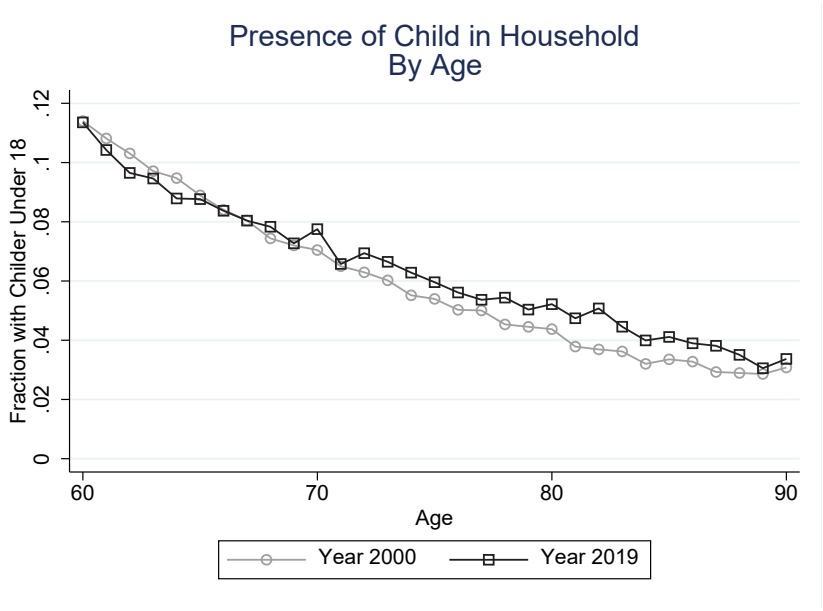
Figure 2.



Data Source: 2000 Census, 2006-2019 American Community Surveys.

In addition, we look at living arrangements by age in Figure 3. The likelihood of living with a child under 18 decreases as one gets older, but the age pattern of living arrangements has shifted over time. Compared to the year 2000 (shown in the lighter line), 2019 (shown in the darker line) had fewer adults in their early 60s living with a child and more adults in their 70s and 80s doing so.

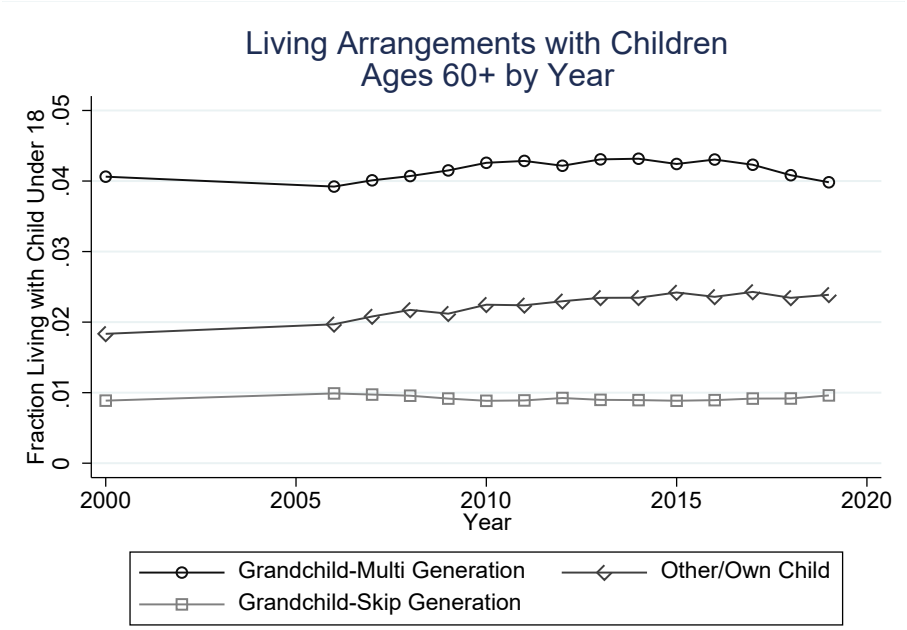
Figure 3.



Data Source: 2000 Census, 2006-2019 American Community Surveys.

Though these graphs include older individuals with children under 18 regardless of the family relationship to the focal individual, the most common relationship is with grandchildren. Figure 4 shows that it is more common to be living in multi-generational families than skip-generational families, but skip-generational families are persistently visible in the data. There are also a rising number of older individuals living with a child under 18 who is not their grandchild – in most cases, this is their own child, due in part to trends towards later timing of childbearing.

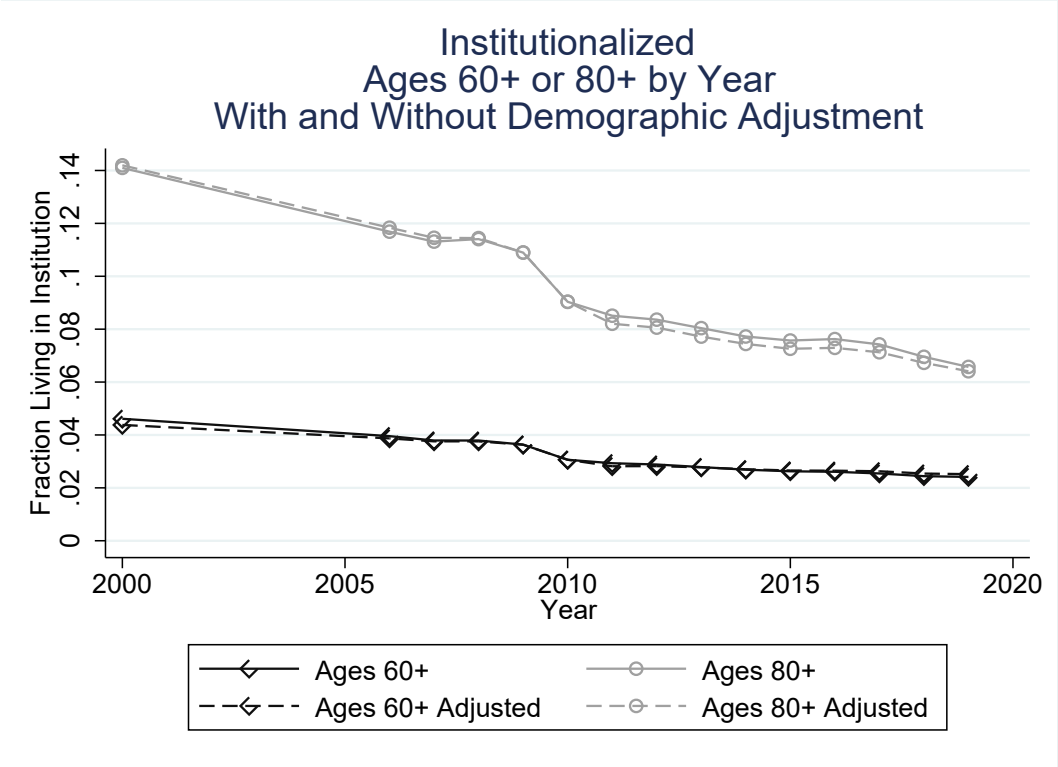
Figure 4.



Data Source: 2000 Census, 2006-2019 American Community Surveys.

We also use the American Community Survey to look at the propensity to be institutionalized. This variable is defined as any individual living in group quarters according to the Census Bureau. The group quarters definition includes a range of settings other than nursing homes, but for the older population the bulk of group quarters living is a nursing or care facility of some kind. There has been a notable decline in institutionalization at older ages since the year 2000, as shown in Figure 5. This is true regardless of whether one corrects for the changing demographic composition of the older population.

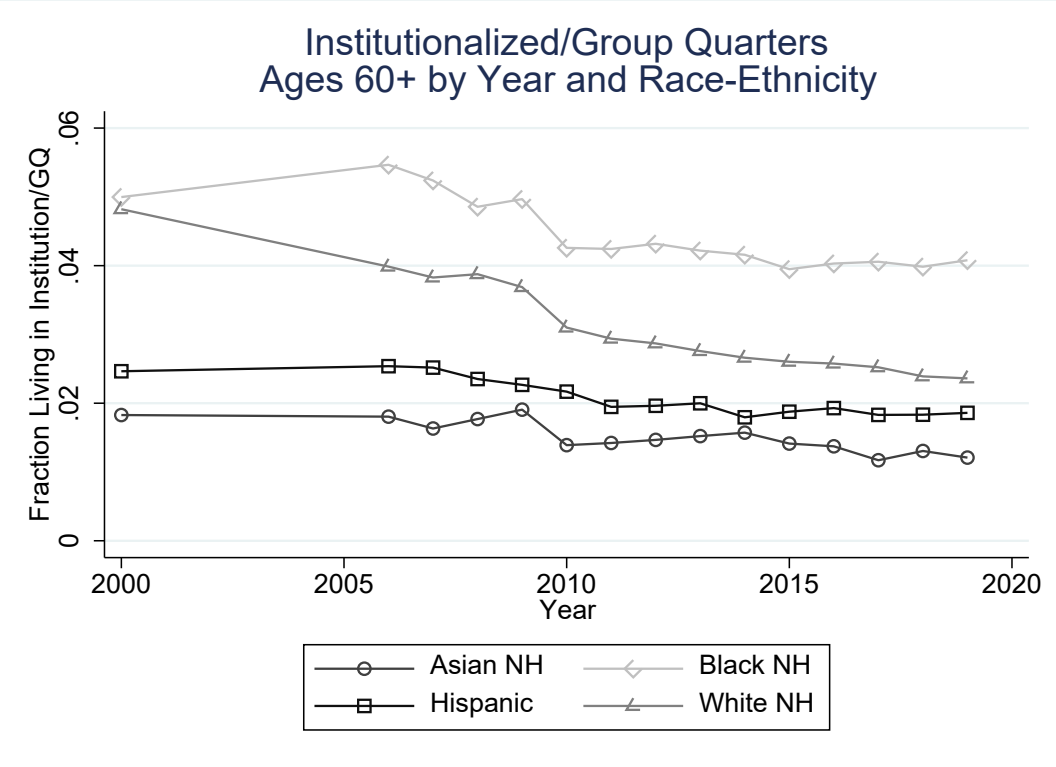
Figure 5.



Data Source: 2000 Census, 2006-2019 American Community Surveys. Note: Institutionalized refers to all those in group quarters, which includes nursing homes and other group living arrangements. "Adjusted" means the distribution of age, race/ethnicity, and sex are fixed at the 2010 population distribution for those ages 60 and up or 80 and up.

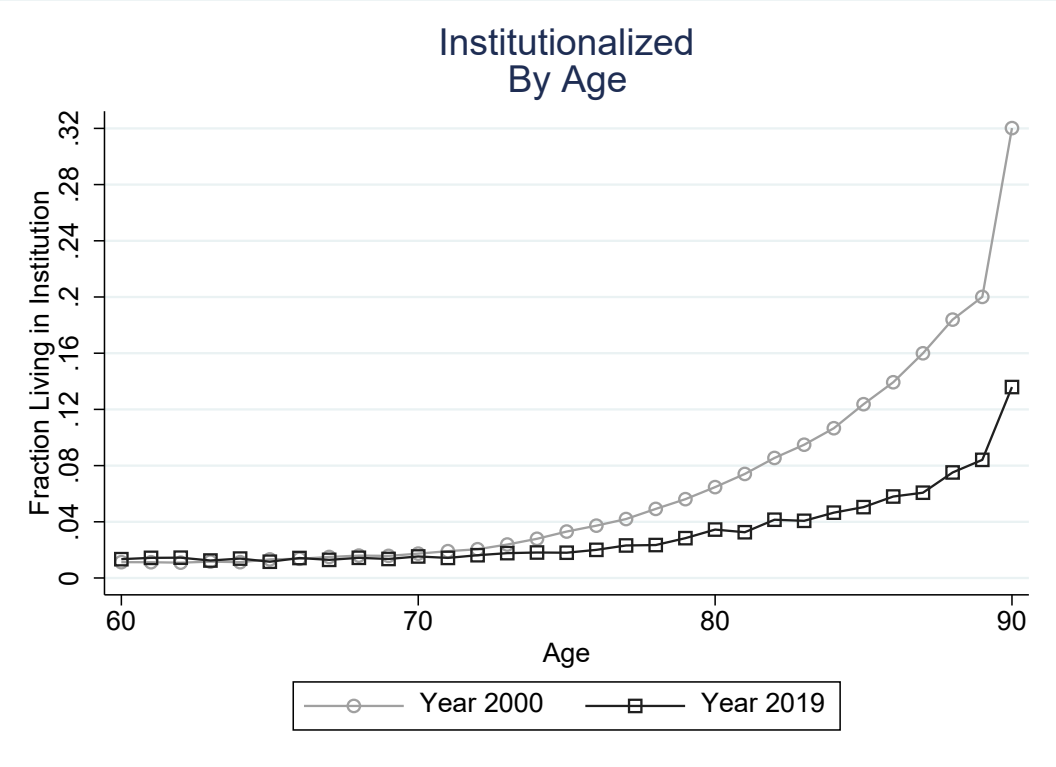
Figure 6 demonstrates that, despite striking differences in baseline levels of institutionalization across race/ethnicity groups, all groups exhibited declines in living in institutional settings. In addition, Figure 7 illustrates dramatic declines in the propensity to be institutionalized at older ages. Understanding these marked changes is important for policy-makers interested in food security of the older population.

Figure 6.



Data Source: 2000 Census, 2006-2019 American Community Surveys. Note: Institutionalized refers to all those in group quarters, which includes nursing homes and other group living arrangements.

Figure 7.



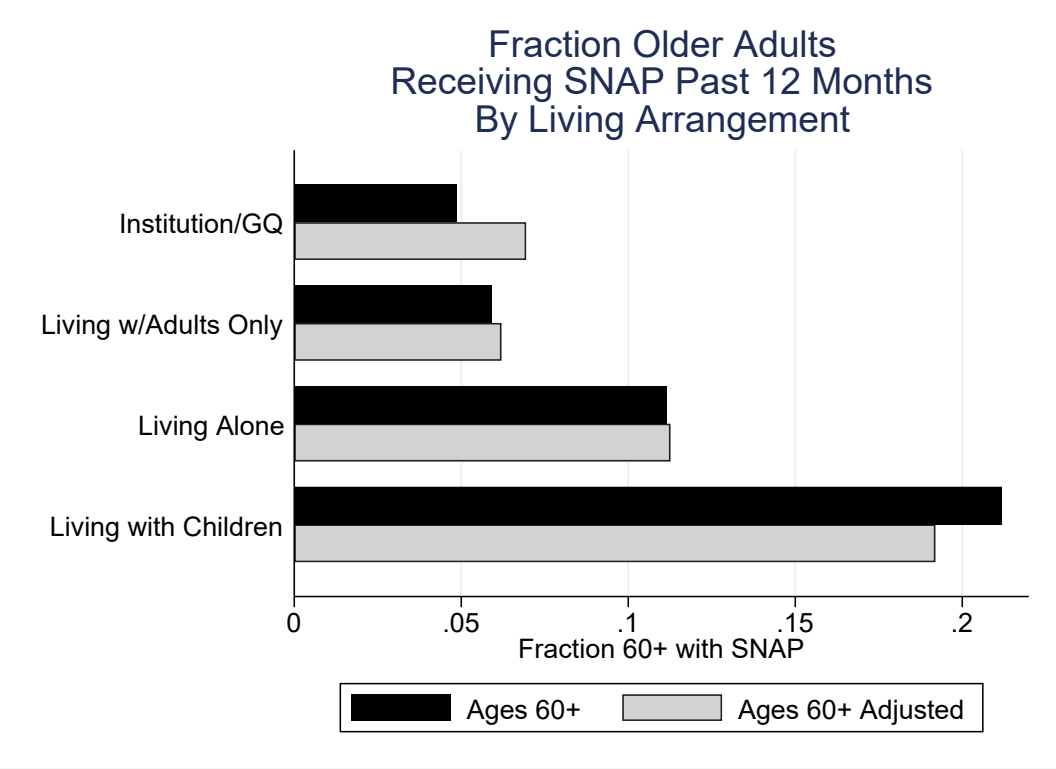
Data Source: 2019 American Community Survey. Note: Data is top-coded at age 90 so 90 includes 90 and up. Institutionalized refers to all those in group quarters, which includes nursing homes and other group living arrangements.

B. ACS Trends in SNAP Participation

As described above, changes in living arrangements may coincide with and/or have a causal impact on SNAP participation. We use the 2019 ACS to identify respondents who report any SNAP benefits received over the past 12 months. We can observe the correlation between living arrangements and SNAP participation in Figure 8. The dark bars show that older adults living with children are much more likely to participate in SNAP, and those living in institutions (or other group quarters) are less likely to participate.

The light bars in Figure 8 show SNAP participation adjusted by demographic characteristics (age, race/ethnicity, and sex), holding the population for each living arrangement fixed at the 2010 full population characteristics for the overall population ages 60 and up. It is clear that the higher reliance on SNAP among those living with children is partially accounted for by these factors, but the higher use of SNAP is evident even after adjusting for the fact that those living with children have different demographic characteristics. The low rates of SNAP participation among the institutionalized are also partially due to demographic characteristics of this population, particularly the fact that they tend to be of older ages.

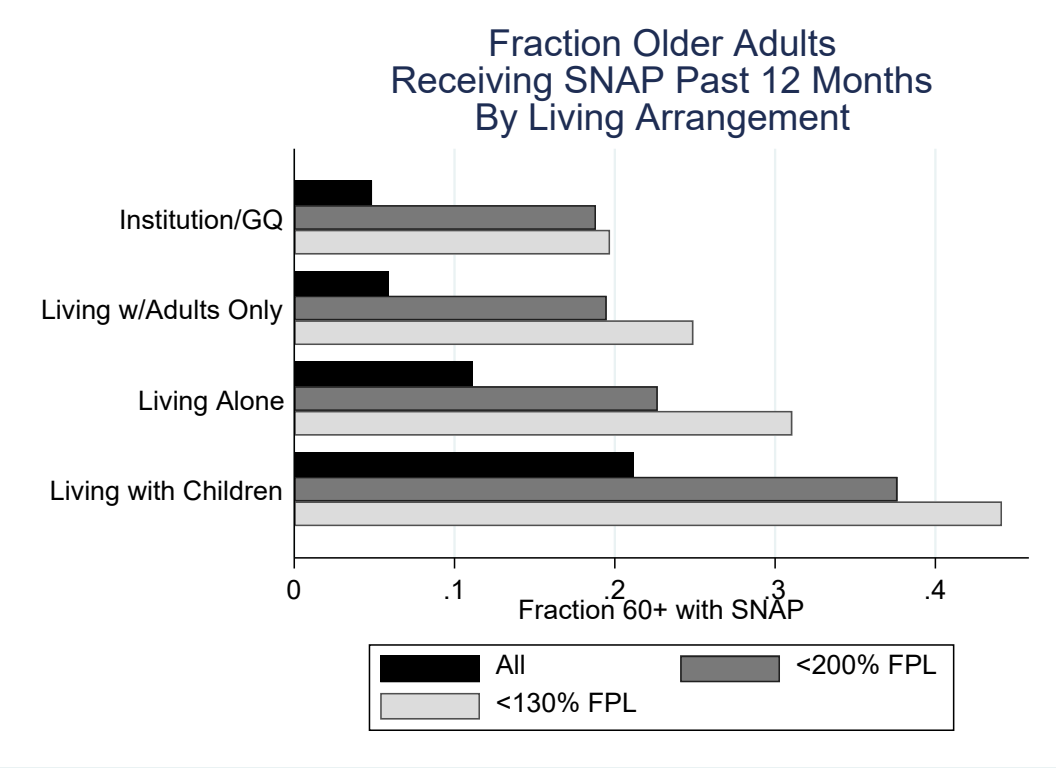
Figure 8.



Data Source: 2019 American Community Survey. Note: Institution/GQ refers to all those in group quarters, which includes nursing homes and other group living arrangements. "Adjusted" means the distribution of age, race/ethnicity, and sex are fixed at the 2010 population distribution for those ages 60 and up.

SNAP eligibility depends on income, which also is a factor in determining living arrangements. In Figure 9, we examine SNAP participation by income level, specifically looking at the full population (the dark bars), the population under 200 percent of the federal poverty line (the dark grey bars), and the population under 130 percent of the federal poverty line (the light grey bars). Not surprisingly, SNAP participation is higher for the lower income groups. Nevertheless, for every income group, SNAP participation is highest for older adults living with children. SNAP benefit receipt is much lower for those living in institutions and group quarters.

Figure 9.



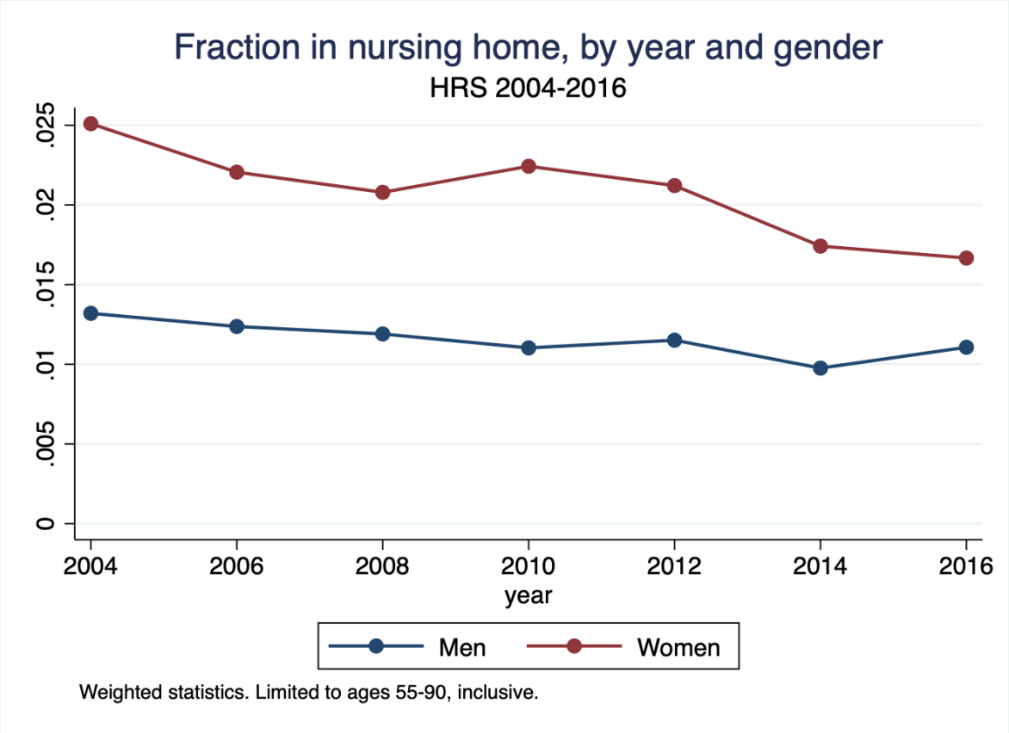
Data Source: 2019 American Community Survey. Note: Institution/GQ refers to all those in group quarters, which includes nursing homes and other group living arrangements. FPL refers to the federal poverty line.

These statistics do not necessarily imply that living arrangements have a causal relationship with SNAP participation. Nevertheless, they do have implications for how SNAP caseloads may evolve given secular trends in living arrangements. For example, SNAP participation among the elderly may increase as institutionalization wanes, and could be affected by changes in co-residence with children.

C. HRS trends in living arrangements and food hardship

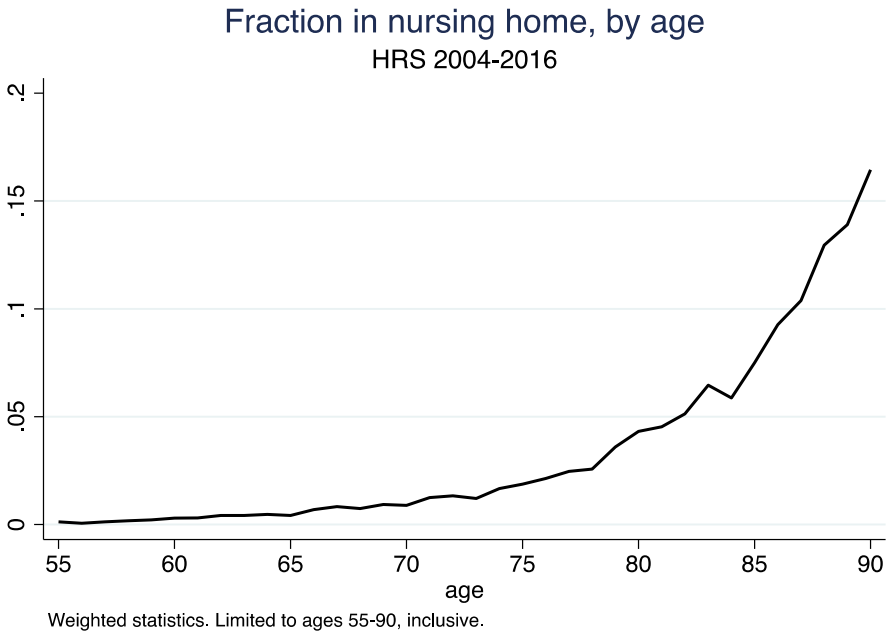
Next, we examine simple descriptive trends using the Health and Retirement Study. These graphs reflect characteristics of the sample age 55-90, inclusive, for the years 2004-2016. Figure 10 shows the trends over time in nursing home residence for men and women, separately. As with the ACS, there is a general decrease in nursing home residence among respondents. Women are more likely to live in an institution than men, but also show a steeper decline over time. Figure 11 shows the age patterns in nursing home residence. As in the ACS (shown above), nursing home residence rises with age, with the relationship becoming steeper at older ages. Figure 12 shows that the share of HRS respondents with a grandchild residing in the household stays relatively constant at around 7 percent throughout the time period, although there is a slight uptick during the Great Recession.

Figure 10.



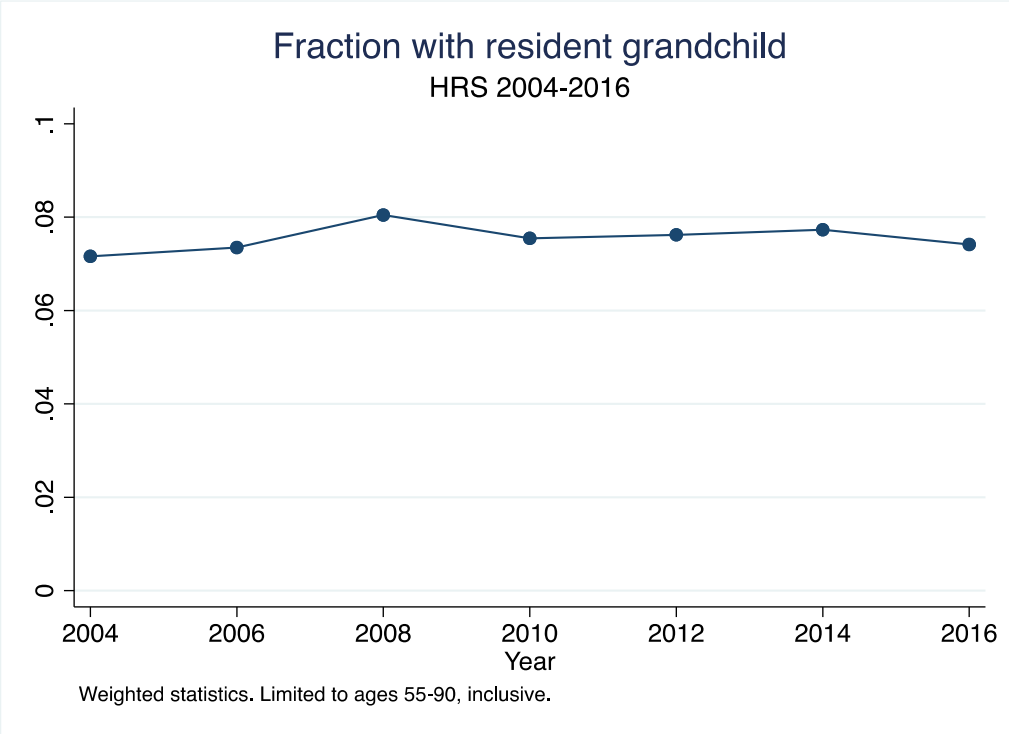
Data Source: Health and Retirement Study 2004-2016.

Figure 11.



Data Source: Health and Retirement Study 2004-2016.

Figure 12.



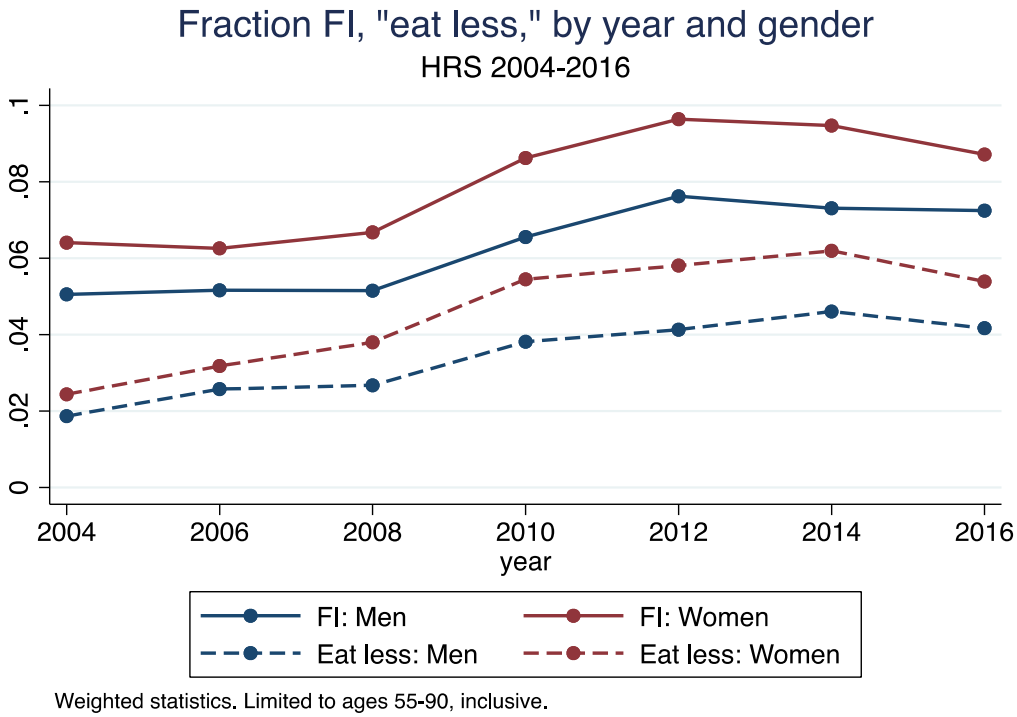
Data Source: Health and Retirement Study 2004-2016.

Turning to measures of food hardship, Figure 13 shows, separately by gender, the share of the sample with food insufficiency in the HRS over time as well as the share with an affirmative answer for the "eat less" variable, defined as those who report having skipped meals or eaten less than they felt they should because there was not enough food in the house.[9] Although the cohort design implies that sample means by year do not solely reflect macroeconomic factors, we note an increase in food-related hardship around the Great Recession evident in the sample. We also note that there is a gender difference in food

[9] Section II provides the exact wording of the questions in the HRS.

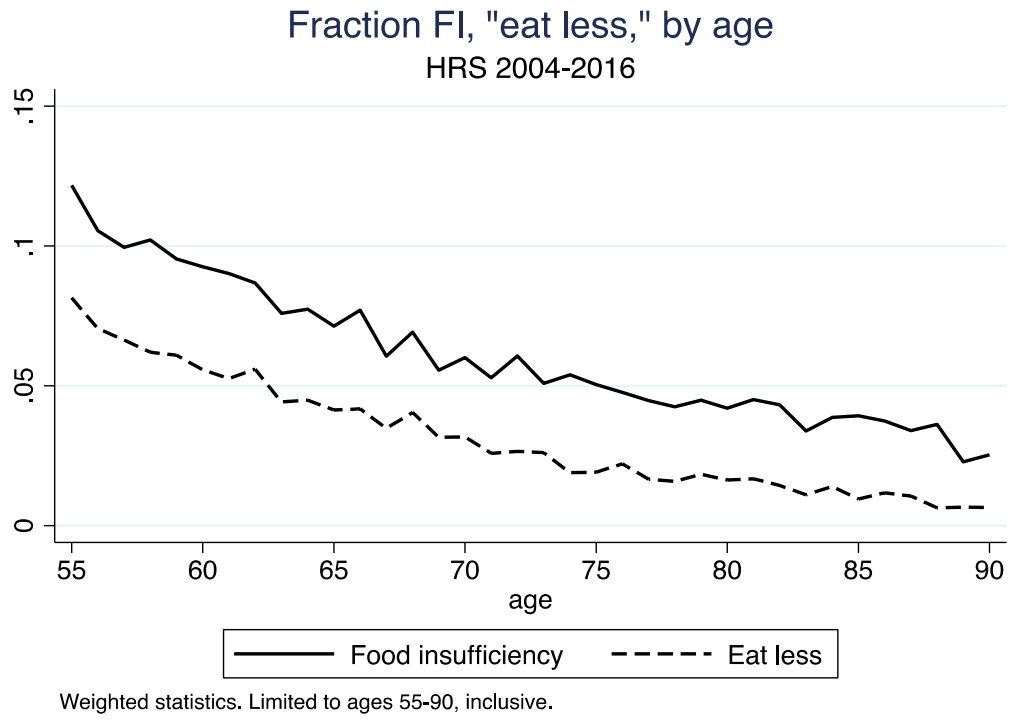
hardship, with women more likely to experience it than men. In addition, Figure 14 shows that food hardship appears to decline with age.

Figure 13.



Data Source: Health and Retirement Study 2004-2016. Note: We use the term "food insufficiency" (FI) to refer to the primary measure of food hardship in the HRS, which is a negative response to the question, "In the last two years/Since [month and year of previous interview], have you always had enough money to buy the food you need?" "Eat less" refers to an affirmative response to the question, "At any time since [month and year of previous interview]/in the last two years, have you skipped meals or eaten less than you felt you should because there was not enough food in the house?"

Figure 14.



Data Source: Health and Retirement Study 2004-2016. Note: We use the term "food insufficiency" (FI) to refer to the primary measure of food hardship in the HRS, which is a negative response to the question, "In the last two years/Since [month and year of previous interview], have you always had enough money to buy the food you need?" "Eat less" refers to an affirmative response to the question, "At any time since [month and year of previous interview]/in the last two years, have you skipped meals or eaten less than you felt you should because there was not enough food in the house?"

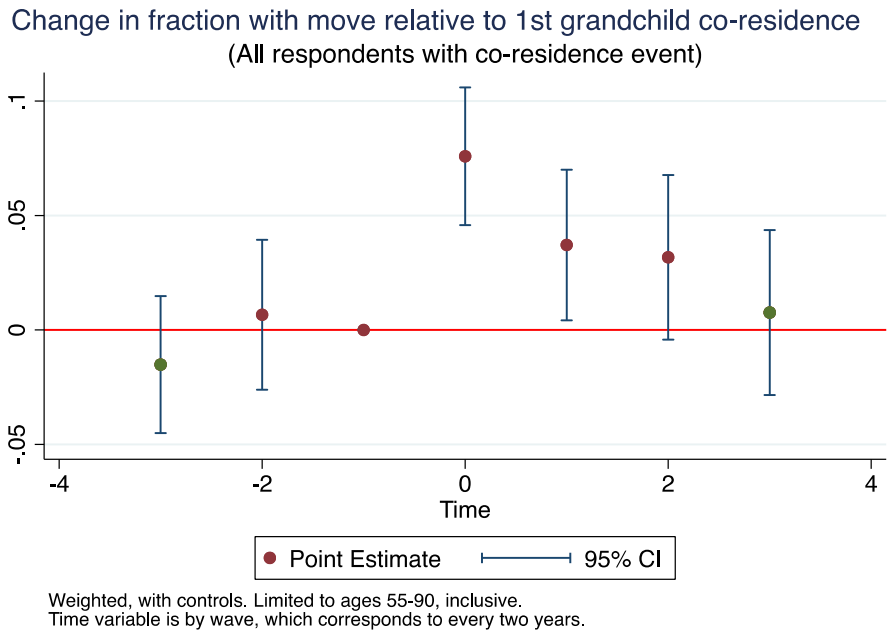
Considering the relationship between food hardship and living with grandchildren (not shown), HRS respondents who ever have a co-resident grandchild experience more food insufficiency than those who never do. On average over the full 2004-2016 panel, they are 5.6 percentage points more likely to be food insecure than those who never have a co-resident grandchild, and 3.7 percentage points more likely to say they have eaten less due to lack of funds. These differences narrow somewhat after controlling for demographics and year (to 3.9

percentage points and 2.8 percentage points, respectively) but remain statistically significantly different from zero.

D. HRS Event Studies

In this section, we examine food insufficiency around particular events in the living arrangements of seniors, ages 55-90, in years 2004 to 2016. We begin by examining the first period of co-residence between the senior and their grandchild, and how it relates to the senior moving to a new home. In Figure 15 below, we array the data around the first time we observe grandchildren (under age 18) in the same household as the respondent. The figure indicates that in years before a co-residence event the fraction of respondents with a household move was stable, but at the time of initial co-residence there was an increase in the share with a move of about 7.6 percentage points (overall, 19 percent of respondents experiencing a co-residence event say they moved houses at the time of the first year of co-residence with a grandchild). This increase in the fraction moving is statistically different from zero at standard significance levels. The share moving remains elevated for two waves following the wave with the first grandchild co-residence, although in the second wave after the event the increase is no longer statistically significant. In what follows, we divide our analysis by whether the respondent moved or not. Our hypothesis is that if the respondent moved houses, the change is more likely to have stemmed from the respondent needing some assistance, and if the respondents remained in their homes and grandchildren entered, the change is more likely to have stemmed from the grandchildren's families needing assistance.

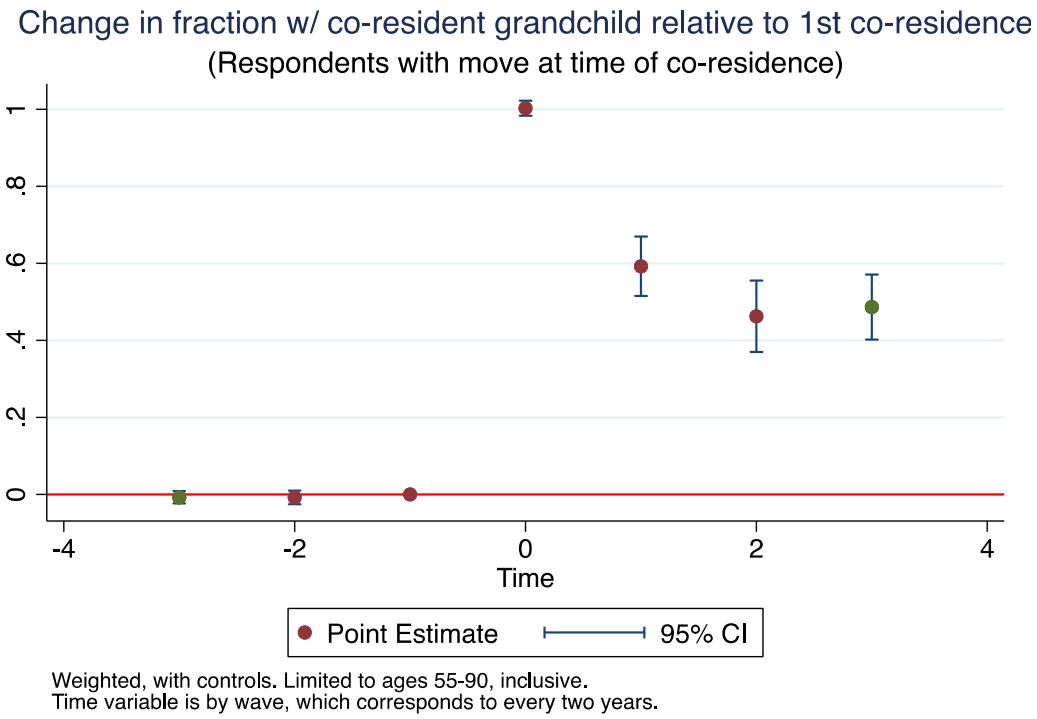
Figure 15.



Data Source: Health and Retirement Study 2004-2016.

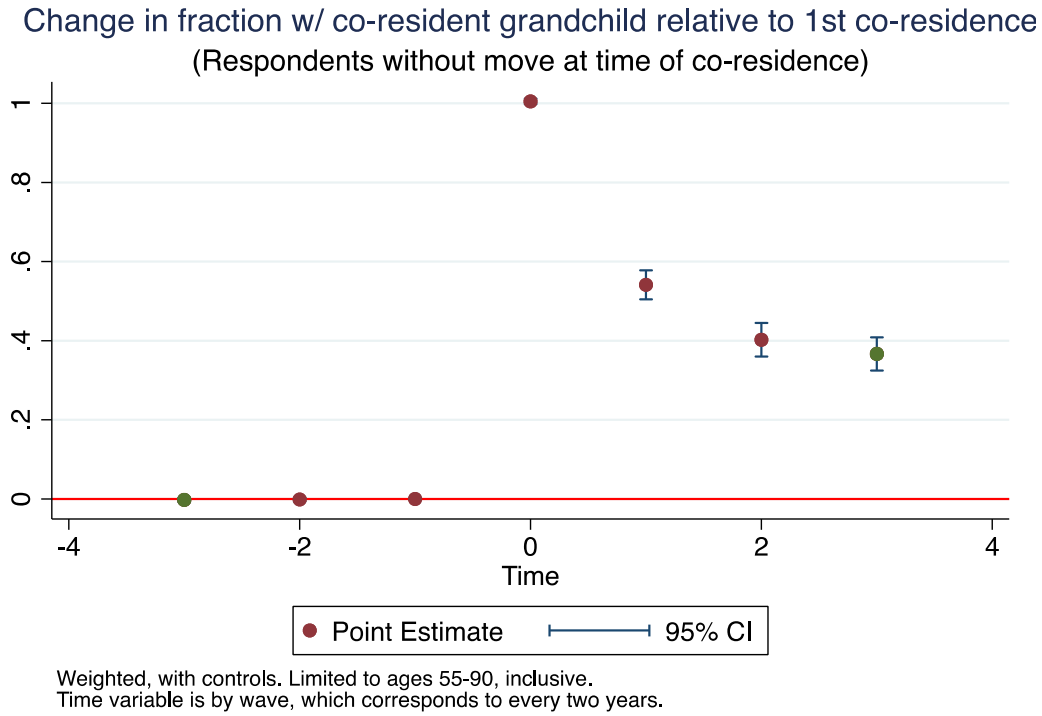
The next two figures examine the fraction of respondents with a co-resident minor grandchild, arrayed around the event of the entrance of a grandchild. By definition, none of the respondents' households include a minor grandchild prior to time "0" and 100% of this sample has a minor grandchild in the household at time "0". The first figure, Figure 16, is for those respondents that had a move at the time of the co-residence of a minor grandchild and the second, Figure 17, is for those respondents whose households did not experience a move at the time of this event.

Figure 16.



Data Source: Health and Retirement Study 2004-2016.

Figure 17.



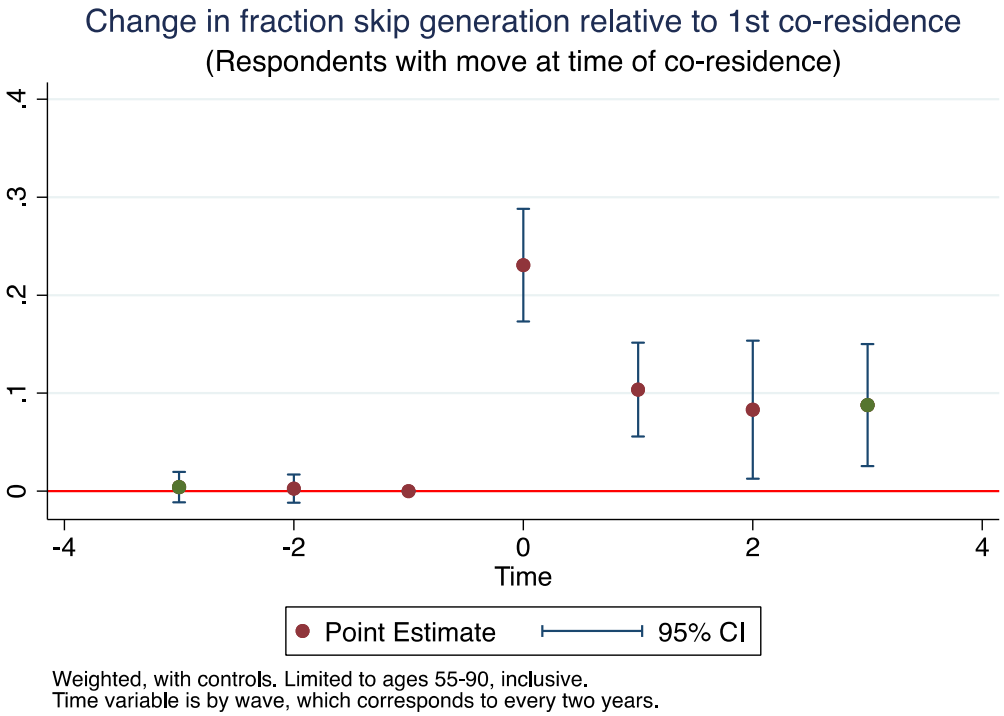
Data Source: Health and Retirement Study 2004-2016.

Both figures make clear that having co-resident grandchildren is not typically a permanent state, since after the first event, the fraction of respondents with a co-resident grandchild decreases substantially. The regression-adjusted estimates show that around 40 percent of respondents with a first co-resident grandchild have a co-resident grandchild by the sixth year after the event, with similar patterns following the event of co-residence for movers and non-movers.

Figure 18 shows the change in the fraction of respondents living in skip-generation households relative to the wave of first grandchild co-residence for respondents that moved at

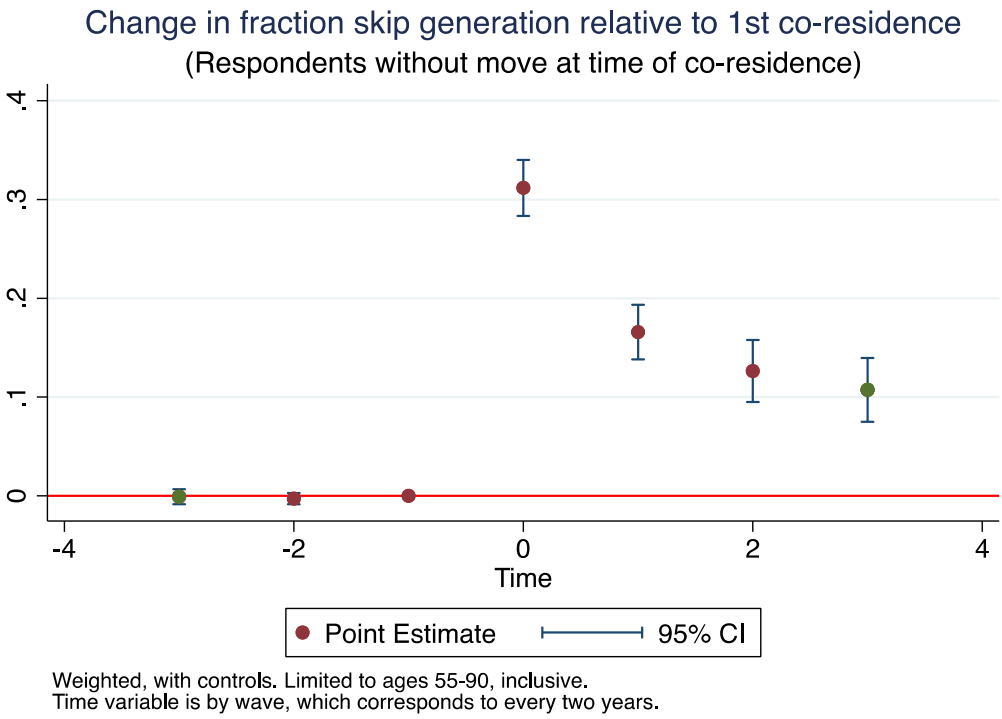
the time of grandchild entry into the household, after controlling for demographics, while Figure 19 shows the same change for respondents that did not move at the time of grandchild entry. Overall, 29 percent of respondents are living in a skip-generation arrangement in their first year of co-residence with grandchildren. If the respondent moved, the household is less likely to be a skip-generation household: the change in probability of being in a skip-generation household is almost 10 percentage points higher for respondents that did not move. This pattern is consistent with the hypothesis that moves are more likely to reflect grandparent need, since fewer grandchild entry events with a move result in a skip-generation household, although it is clear from these patterns that the correlation between moving and grandparent need is not perfect.

Figure 18.



Data Source: Health and Retirement Study 2004-2016.

Figure 19.

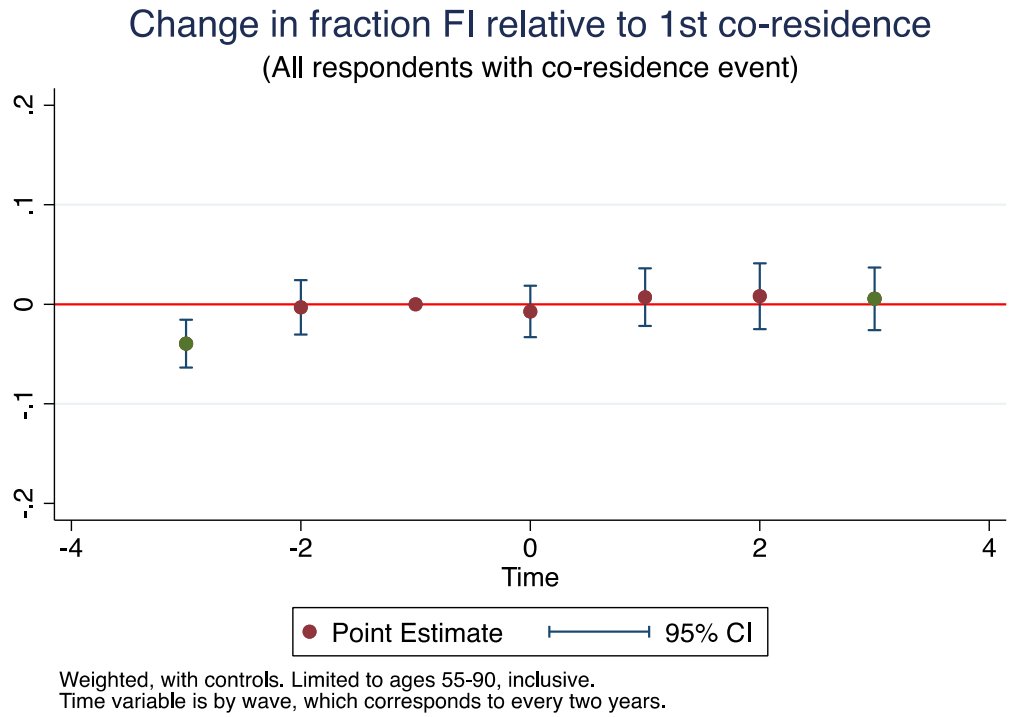


Data Source: Health and Retirement Study 2004-2016.

Next, we turn to examining changes in food insufficiency in the households of seniors who begin co-residing with grandchildren. In Figure 20, we show the change in the fraction of respondents experiencing food insufficiency around the time of first co-residence with a grandchild. The figure shows that the level of food insufficiency was lower prior to the co-residence event but that it rose well before the grandchild began to co-reside, remaining constant afterwards. Comparing households with a move (Figure 21) and those without a move (Figure 22), it is clear that movers have different patterns in food insufficiency than non-movers, with food insufficiency continuing to rise following the period of initial co-residence (although, due to the small sample size, the confidence intervals on the estimates generally include zero). The patterns are similar for models of responses to the question about the

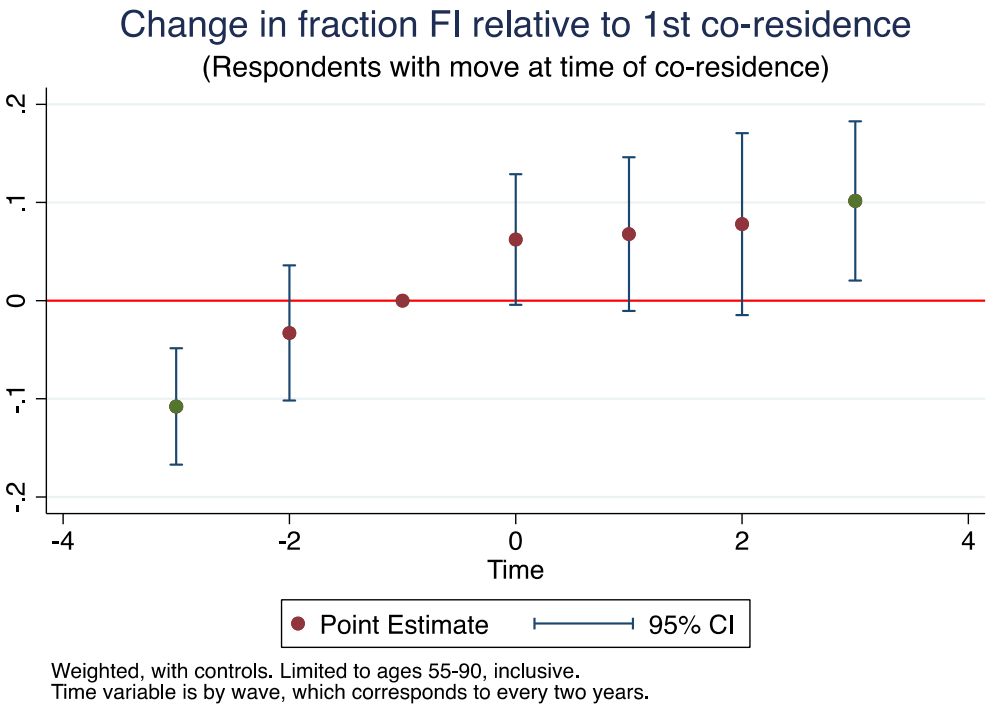
respondent having skipped meals or eaten less than they felt they should because there was not enough food in the house, however the confidence intervals are somewhat wider for this measure of food hardship (Figures 23-25).

Figure 20.



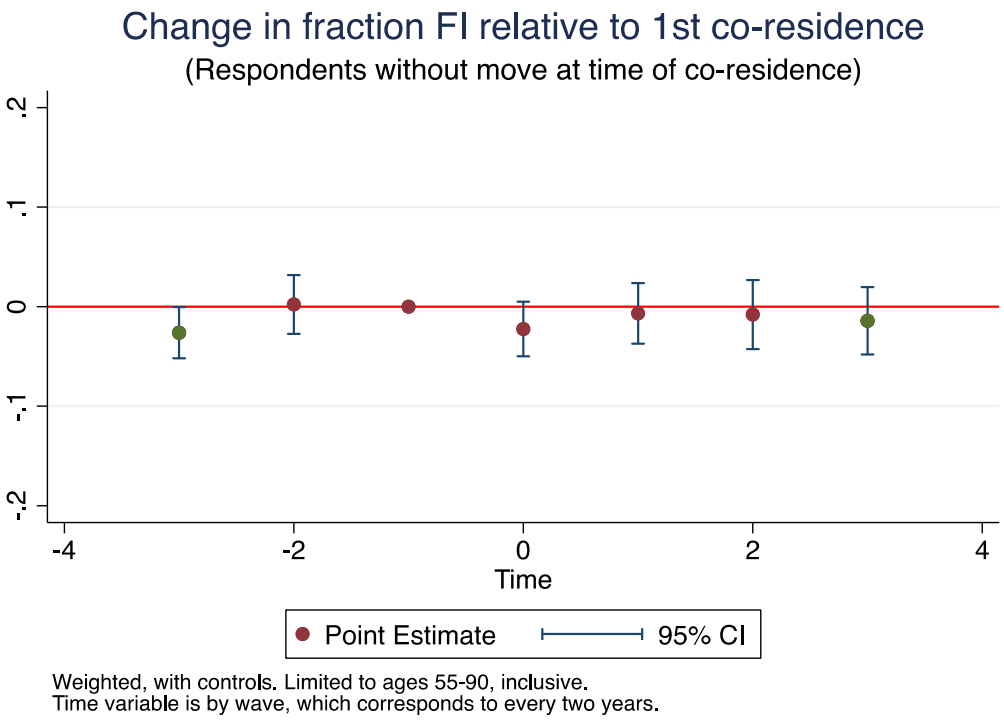
Data Source: Health and Retirement Study 2004-2016. Note: We use the term "food insufficiency" (FI) to refer to the primary measure of food hardship in the HRS, which is a negative response to the question, "In the last two years/Since [month and year of previous interview], have you always had enough money to buy the food you need?"

Figure 21.

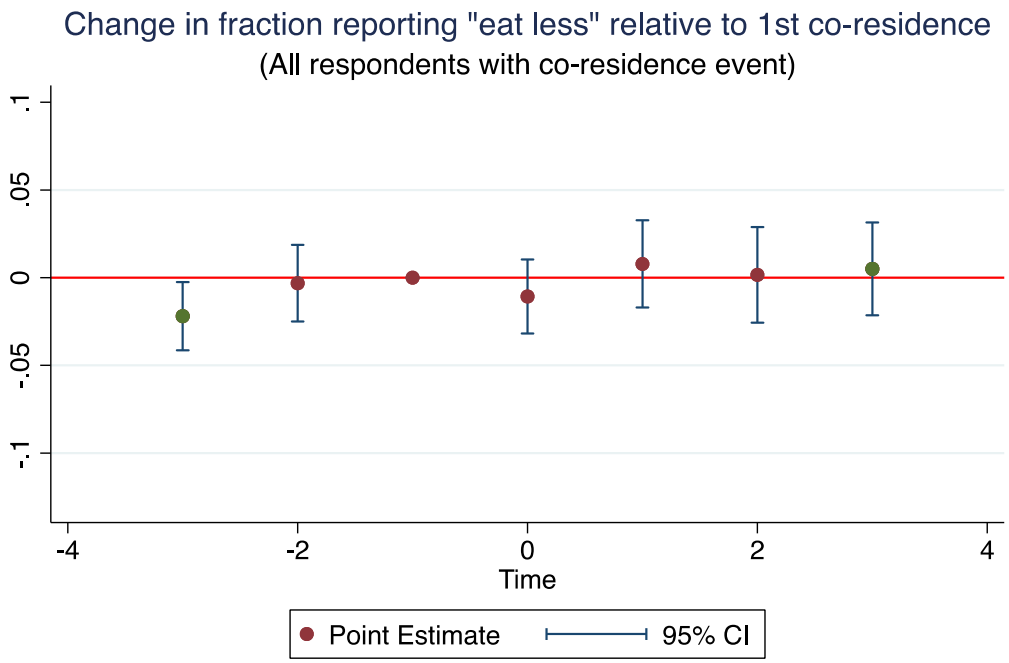


Data Source: Health and Retirement Study 2004-2016. Note: We use the term "food insufficiency" (FI) to refer to the primary measure of food hardship in the HRS, which is a negative response to the question, "In the last two years/Since [month and year of previous interview], have you always had enough money to buy the food you need?"

Figure 22.

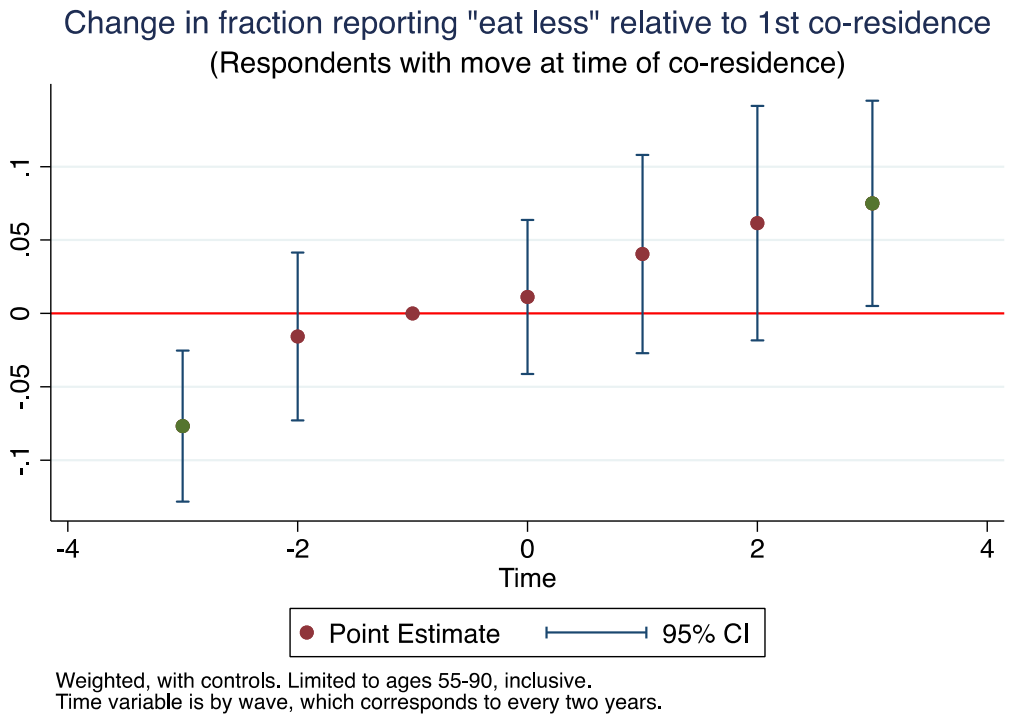


Data Source: Health and Retirement Study 2004-2016. Note: We use the term "food insufficiency" (FI) to refer to the primary measure of food hardship in the HRS, which is a negative response to the question, "In the last two years/Since [month and year of previous interview], have you always had enough money to buy the food you need?" Figure 23.



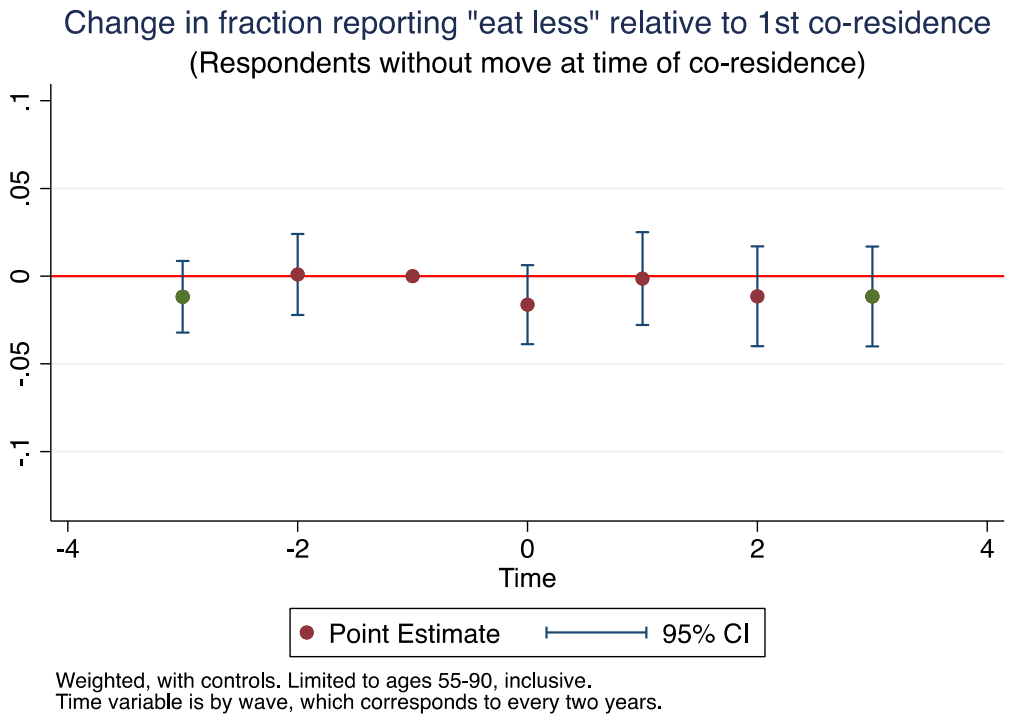
Data Source: Health and Retirement Study 2004-2016. Note: “Eat less” refers to an affirmative response to the question, “At any time since [month and year of previous interview]/in the last two years, have you skipped meals or eaten less than you felt you should because there was not enough food in the house?”

Figure 24.



Data Source: Health and Retirement Study 2004-2016. Note: “Eat less” refers to an affirmative response to the question, “At any time since [month and year of previous interview]/in the last two years, have you skipped meals or eaten less than you felt you should because there was not enough food in the house?”

Figure 25.



Data Source: Health and Retirement Study 2004-2016. Note: "Eat less" refers to an affirmative response to the question, "At any time since [month and year of previous interview]/in the last two years, have you skipped meals or eaten less than you felt you should because there was not enough food in the house?"

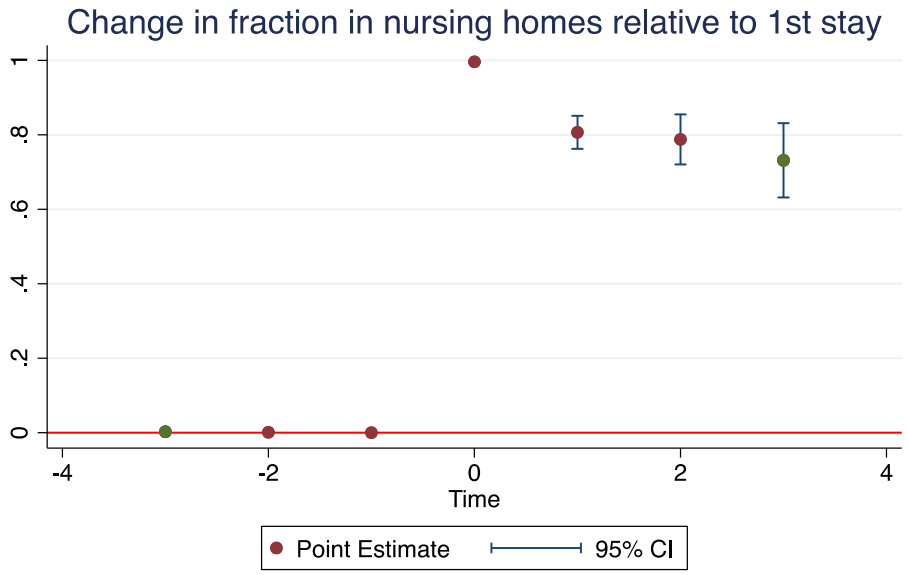
As reported above, older Americans living with grandchildren have more food insufficiency than those who do not on average. In addition to these average differences, it is clear from the event studies shown in the preceding figures that food insufficiency increases prior to the year of initial co-residence with grandchildren. Importantly, as the rate of food insufficiency appears either to stabilize or to continue to rise, but not to exhibit a discrete jump, in the period following the initial co-residence, it does not seem to be the case that the co-residence with grandchild is solely responsible for an increase in food insufficiency among seniors in the HRS.

We now turn to institutionalization. The fraction of 55- to 90-year-olds who are living in a nursing home is trending down in later years, particularly among women. While this may be good news since most elderly report that they would prefer to "age-in-place" (Harrell et al., 2014), nursing homes likely provide adequate food, so a reduction in nursing home residence may be a change in living arrangements that is correlated with food insecurity.

Figure 26 arrays the data around the first observed nursing home stay[10] and shows the fraction reported or observed in a nursing home at the time of the survey. As with the event study figures before, the fraction is zero prior to year "0", and is one by construction at year "0." The sample is balanced at time -1 and 0 to ensure that we see at least one "pre-period" for everyone we observe in a nursing home; outside that period the composition of the sample is influenced by attrition including death of the respondent. The figure shows that the fraction in nursing homes declines after the initial event, although it remains high.

[10] By a nursing home "stay" we mean that the person is either interviewed in a nursing home or reported to be in a nursing home at the time of the interview.

Figure 26.



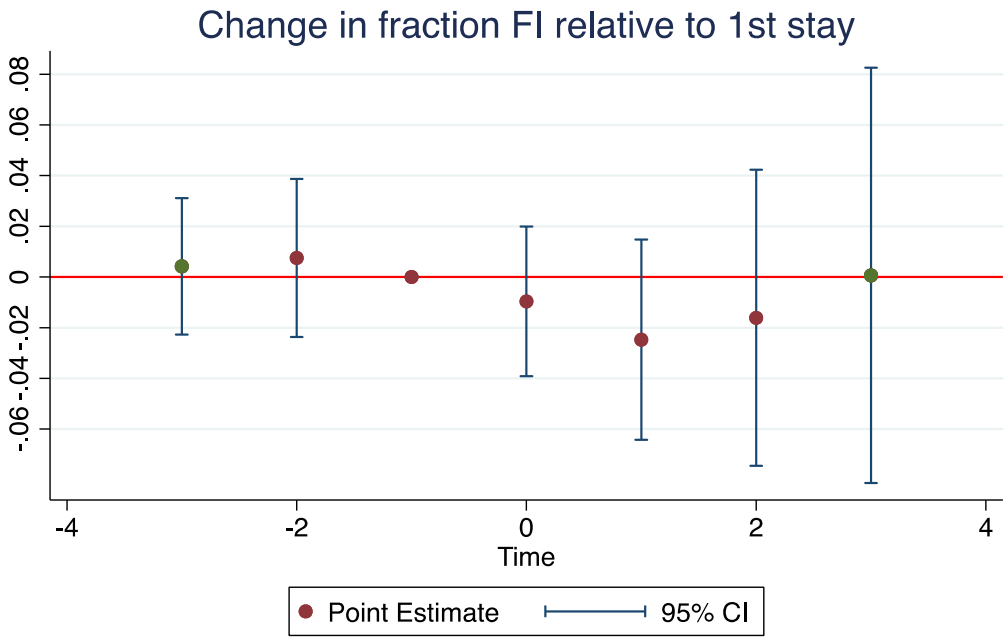
Data Source: Health and Retirement Study 2004-2016.

In Figures 27 and 28, we examine the fraction of respondents who say they are food insufficient (Figure 27) and who say they had eaten less because of lack of food (Figure 28) relative to the first nursing home stay.[11] There are two important things to keep in mind about food insufficiency as measured in the HRS. The first is that food insufficiency is a household concept. The second is that in the HRS, the reference window is two years, so the food insufficiency reported may include time before entering an institution. Combined, this means that the food insufficiency may refer to the household for the nursing home resident prior to moving to the nursing home or after leaving, or to the status of a spouse who remains in the

[11] See Data section of text for the exact wording of the question.

community.[12] For both food insufficiency and "eat less," the pattern suggests that when an individual enters a nursing home food sufficiency improves, although the change is only statistically significant for the "eat less" outcome.

Figure 27.

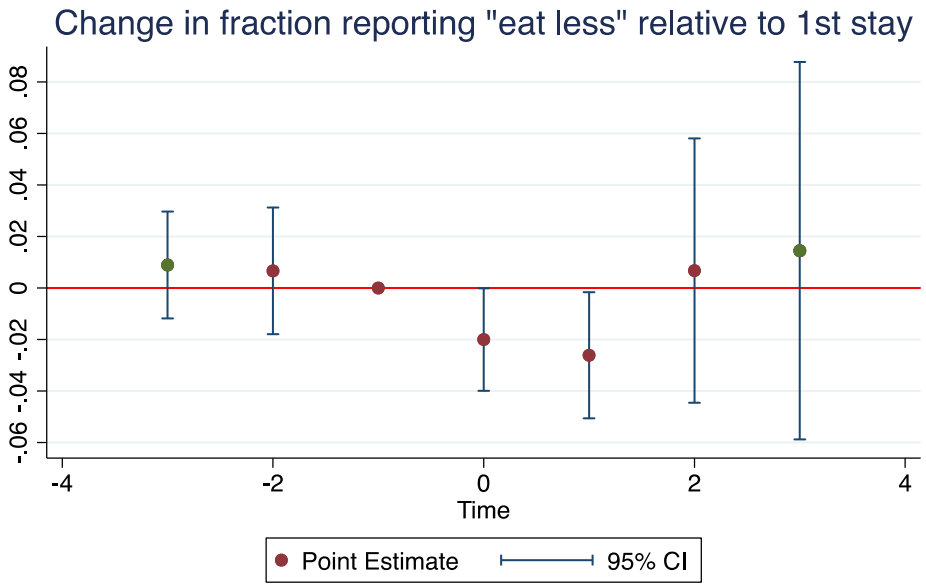


Weighted, with controls (gender, race/ethnicity, age, year, and marital status dummies).
Limited to ages 55-90, inclusive. Time variable is by wave, which corresponds to every two years.
Uses sample that is balanced in the [-1,0] pre-period. N=4,941.

Data Source: Health and Retirement Study 2004-2016. Note: We use the term "food insufficiency" (FI) to refer to the primary measure of food hardship in the HRS, which is a negative response to the question, "In the last two years/Since [month and year of previous interview], have you always had enough money to buy the food you need?"

[12] The sub household id does not change for married spouses when one enters a nursing home, and only one food security status is reported.

Figure 28.



Data Source: Health and Retirement Study 2004-2016. Note: "Eat less" refers to an affirmative response to the question, "At any time since [month and year of previous interview]/in the last two years, have you skipped meals or eaten less than you felt you should because there was not enough food in the house?"

V. Discussion and Conclusion

The population of older Americans is growing rapidly, and their living arrangements are evolving as the result of social change and policy factors. It is critical that policy-makers recognize these changes and understand their causal impacts so as to best direct resources to alleviate food-related hardship among seniors.

For example, as more older Americans become caregivers for children and grandchildren, food assistance programs may need to change their eligibility guidelines and outreach to ensure these seniors have adequate support. SNAP guidelines may need to be

updated to take account of informal grandchild caregiving arrangements. At the same time, policies addressing underlying determinants of grandparent caregiving – such as those related to cash welfare, drug addiction, and incarceration – may have unrecognized spillovers in the areas of food-related hardship and SNAP.

Similarly, widespread policy efforts to reduce institutionalization of older Americans may have the unintended consequence of raising food hardship and SNAP participation among seniors.[13] A better understanding of these dynamics would provide useful input for Medicaid policy as well as help SNAP respond to the changing institutionalization landscape.

The analysis presented here suggests a few key facts. First, living arrangements are changing in nuanced ways. Seniors are more likely to live with children under 18 than in the past, but this trend is only apparent among white non-Hispanic individuals. Seniors are also less likely to live in institutions than in the past. Second, living arrangements are strongly correlated with SNAP participation. Senior households with children are much more likely to participate in SNAP; those in institutions are much less likely. Third, co-residence with grandchildren is associated with rising food insufficiency, but this rise occurs before the period of co-residence, suggesting other factors are contributing. Finally, the evidence is suggestive that moving into a nursing home alleviates food insufficiency.

Future work will expand the analysis presented here in several ways. We hope to examine policy changes that affect living arrangements and learn more about their effects on SNAP participation and food hardship. For example, the cost-shifting from Medicaid to SNAP

[13] However, there are other food programs, like those providing home-delivered meals, that also promote aging in place for a subgroup of older adults.

that arises indirectly from HCBS Medicaid waivers promoting aging in place is an under-studied policy issue that warrants further research.

In addition, we have analyzed the Current Population Survey to further assess the linkages between children in the home of seniors (including grandchildren and other children under 18) and food insecurity and SNAP participation. The details of that study are attached as a separate document.

References

Beauregard, Lisa Kalimon, and Edward Alan Miller. 2020. “Why Do States Pursue Medicaid Home Care Opportunities? Explaining State Adoption of the Patient Protection and Affordable Care Act’s Home and Community-Based Services Initiatives.” *RSF: The Russell Sage Foundation Journal of the Social Sciences* 6(2): 154-178.

Dunifon, Rachel. 2018. *You’ve Always Been There for Me: Understanding the Lives of Grandchildren Raised by Grandparents*. Rutgers University Press, New Brunswick.

Fuller-Thomson, Esme, Meredith Minkler, and Diane Driver. 1997. "A Profile of Grandparents Raising Grandchildren in the United States." T*he Gerontologist* 37 (3):406-411. https://academic.oup.com/gerontologist/article/37/3/406/739832 .

Gualtieri, Marie C. 2019. “Why Some Grandparents Raising Grandchildren Can’t Get Government Help.” *Next Avenue Opinion.* https://www.nextavenue.org/grandparents-raising-grandkids-cant-get-government-help/.

Gundersen, Craig, and James P. Ziliak. 2018. “Food Insecurity Research in the United States: Where We Have Been and Where We Need to Go.” *Applied Economics Perspectives and Policy* 40 (1): 119-185.

Harrell, Rodney, Jana Lynott, Shannon Guzman, and Cheryl Lampkin. 2014. “What is Livable? Community Preferences of Older Adults.” AARP Public Policy Institute report.

Hayslip Jr., Bert, and Patricia L. Kaminski. 2005. "Grandparents Raising Their Grandchildren: A Review of the Literature and Suggestions for Practice." *The Gerontologist* 45 (2):262-269. https://academic.oup.com/gerontologist/article/45/2/262/815984.

Hirai Ashley H., Jean Y. Ko, and Pamela L. Owens, Carol Stocks C, and Stephen W. Patrick. 2021. “ Neonatal Abstinence Syndrome and Maternal Opioid-Related Diagnoses in the US, 2010-2017,” *Journal of the American Medical Association* 325(2):146–155.

Kaiser Commission on Medicaid and the Uninsured. 2000. “The Olmstead Decision: Implications for Medicaid.” Kaiser Family Foundation Policy Brief. https://www.kff.org/medicaid/issue-brief/the-olmstead-decision-implications-for-medicaid/

Levy, Helen. 2015. "Income, Poverty, and Material Hardship Among Older Americans." *RSF: The Russell Sage Foundation Journal of the Social Sciences* 1(1): 55-77.

Livingston, Gretchen. 2013. “At Grandmother’s House We Stay.” Social and Demographic Trends Report. Washington, D.C.: Pew Research Center. https://www.pewsocialtrends.org/2013/09/04/at-grandmothers-house-we-stay/.

Marek, Karen Dorman, Frank Stetzer, Scott J. Adams, Lori Popejoy, and Marilyn Rantz. 2012. “Aging in Place Versus Nursing Home Care: Comparison of Costs to Medicare and Medicaid.” *Research in Gerontological Nursing* 5(2): 123-129.

Minkler, Meredith, and Esme Fuller-Thomson. 2005. "African American Grandparents Raising Grandchildren: A National Study Using the Census 2000 American Community Survey." *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences* 60(2):S82-S92.

National Academies of Sciences, Engineering, and Medicine. 2016. Meeting the dietary needs of older adults: Exploring the impact of the physical, social, and cultural environment: Workshop summary. Washington, DC: The National Academies Press.

Park, Hwa-Ok Hannah. 2006. "The Economic Well-Being of Households Headed by a Grandmother as Caregiver." *Social Service Review* 80 (2):264-296. doi: https://doi.org/10.1086/503122.

Pilkauskas, Natasha and Rachel Dunifon. 2016. "Understanding Grandfamilies: Characteristics of Grandparents, Non-resident Parents and Children." *Journal of Marriage and Family*, 78, 623-633

Pittman, LaShawnDa. 2015. "How Well Does the "Safety Net" Work for Family Safety Nets? Economic Survival Strategies among Grandmother Caregivers in Severe Deprivation." *RSF: The Russell Sage Foundation Journal of the Social Sciences* 1 (1):78-97. https://www.rsfjournal.org/content/1/1/78.abstract.

Smith, Carrie Jefferson, and Wynetta Devore. 2004. "African American Children in the Child Welfare and Kinship System: From Exclusion to Over-Inclusion." *Children and Youth Services Review* 26: 427–46.

Swann, Christopher A., and Michelle Sheran Sylvester. 2006. "The Foster Care Crisis: What Caused Caseloads to Grow." *Demography* 43 (2):309-335.

Ziliak, James P. and Craig Gundersen. 2016. "Multigenerational Families and Food Insecurity." *Southern Economic Journal* 82(4): 1147-1166.