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Household Composition, Resource Use, and the Resilience of Older Adults Aging in Community During COVID-19

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Abstract

Household composition is associated with older residents' access to resources. This research uses the pandemic period as a stress-test to detect differences in resilience between older adults who lived alone, with a partner, or with other co-residents. Using the Health and Retirement Study (HRS) from 2010 through 2018, we first developed a profile of pre-pandemic needs and resources for each household composition. Using the 2020 HRS survey wave, we then compared pandemicperiod experiences between the three household types. Older adults living in partner households had more economic resources prior to the pandemic and experienced the fewest disruptions to their finances and personal assistance compared with other types. Older adults living alone entered the pandemic with the least financial resources and personal assistance, particularly in the context of need. These residents also lost more assistance and experienced more loneliness during the pandemic. Co-resident households received the most informal personal care support, which remained relatively stable during the pandemic. They had more economic resources than singleperson households prior to the pandemic but experienced more pandemic-related financial hardships than other types. Household composition was systematically related to resilience during the pandemic, and Social Security policy might increase the capacity of older adults living alone to cope with large-scale disruptions.

1. Introduction

Older adults, who have limited economic resources and higher rates of chronic health conditions and functional disabilities, can be particularly sensitive to externally-imposed stressors such as extreme weather, major economic fluctuations, or community-wide disasters (Fernandez et al. 2002). The COVID-19 pandemic may have been especially difficult as it simultaneously produced economic and health challenges while impeding access to community-based support. Older residents with more resources may have been more resilient to these stressors. Household composition may be an important determinant of resiliency as household members can increase economic resources and expand personal care and assistance options. On the other hand, household composition can introduce exposure risks, crowding, and caregiving demands. This research considers whether household composition was associated with systematic differences in older residents' ability to cope with pandemic conditions.

Using the Health and Retirement Study (HRS), we first examined the pre-pandemic adequacy of older adult resources – both financial resources and supportive services - by household type. We then framed the pandemic period as a stress-test to detect associations between resilience and household composition type. We described resilience as an older adult's ability to continue to meet housing costs, food, and medication, their ability to continue to receive assistance commensurate with health and functional ability, and stability in self-reported mental well-being.

Since older adults living alone often have less income and fewer resources (Burholt and Windle 2006; Mutchler et al. 2017), we hypothesized that older adults who lived alone would have less capacity to adapt to the pandemic and would experience greater rates of unmet need during COVID-19. We found that these households had a lower income than the other two types at baseline, and they had less economic stability than partner households but more than co-residents during the pandemic. Older adults who lived alone were also more dependent on professional support at baseline. They received fewer hours of personal assistance in the context of their level of need before the pandemic and were most likely to lose personal assistance during the pandemic. Given the characteristics of mutual economic and personal care support, we hypothesized that older adults who lived in complex households had more resources to adapt but also experienced more household-level disruptions. While older adults in co-residence had more income at baseline

than single-person households, they experienced more financial instability and new economic hardship during the pandemic. However, these households also received more personal assistance at baseline and better retained stable assistance through the pandemic. Finally, given their younger average age and greater educational attainment, we postulated that older adults in partner households would have more resources at baseline and more pandemic resilience, and we found this to be the case as compared to the other two types.

Older adult household composition is important to consider because public benefit programs have the capacity to close gaps and increase safe access to preferred living arrangements (Mudrazija et al. 2020; Tai and Treas 2009). Our findings imply that public programs might improve resilience by targeting economic resources and access to personal assistance for older adults who live alone and ensure economic stability for older adults who live in co-residence.

2. Background

To live safely through a disruption—whether global, like the pandemic, or personal, such as a health crisis—an older adult must have adequate income and personal assistance that aligns with their housing and support needs. Access to each of these factors, income and assistance, differ by household composition type. This review identifies links between each factor and resilience as well as the links between each factor and household composition type.

2.1 Income

Economic resources help people cope with disruptions. Conversely, low income (and associated lack of savings) can impede older adults' ability to hire needed services or meet new costs resulting from a disruption. The pandemic created unique expenses, including fees for the delivery of medication and food, and costs for technology that became a necessary predicate to medical care and social inclusion (Budget and Policy Priorities 2021; Celik, Ozden, and Dane 2020). Yet, in any disruption, new conditions may present new costs that are particularly challenging for those living within a very tight budget. Older adults who receive support and assistance may experience an additional layer of financial strain if conditions create gaps in these supports.

In general, it is more economically difficult to live alone. Supplemental Security Income (SSI) recipients in single-person households experience higher poverty rates (Koenig and Rupp

2003). On the other hand, multigenerational households tend to have diverse income streams as multiple household members contribute income and resources compound without proportionally increasing housing costs. In this way, complex household arrangements can be more economically efficient than living alone (Chevan 1996; Hwang n.d.; Mutchler and Baker 2009; Waehrer and Crystal 1995). But co-resident and multigenerational households are also more likely to rely on residents connected to the workforce, so they may be more sensitive to macro-economic fluctuations.

2.2 Health

Household composition may also have pandemic-period health implications. During the pandemic, there was a higher transmission risk in crowded households (Karmakar, Lantz, and Tipirneni 2021; Nafilyan et al. 2021). Because in-person work increased the risk of COVID-19 infection (especially among those working in the healthcare sector), those living with people working outside of the home may have faced greater exposure to disease. Older adults of color disproportionately live in co-resident households and likely faced increased risk; indeed, Black adults with high personal health risk were more likely to live with a health sector worker, and Hispanic adults at elevated risk of severe illness lived with residents who were less likely to work virtually (Selden and Berdahl 2020).

Adults ages 65 and older are also more likely to live with chronic health conditions which require them to follow regimented health routines. These health conditions can limit functional ability and increase their dependence on support systems to meet basic needs such as eating or dressing (Ralph et al. 2013). The greater level of need associated with chronic health conditions may create constraints that reduce older adults' capacity to cope with disruptions. In general, older residents of partner households have better mental and physical health and will bring fewer health-related considerations to disruption response (Warner and Adams 2012; Wong and Waite 2015).

Health also impacts social experiences. Both the progression of a chronic illness and increases in mobility impairment are risk factors for social isolation, which itself increases the risk of the subjective experience of loneliness (Dahlberg et al. 2015; Ong, Uchino, and Wethington 2016). Loneliness and isolation are also age-related health concerns which can be linked to household composition type. Though they are related concepts, loneliness describes a perception of intimacy, while isolation defines an objective condition of minimal contact with others (Ong, Uchino, and

Wethington 2016). Loneliness has been linked to mobility decline, reduced cardiovascular health, and higher mortality rates, while isolation has been associated with anxiety, depression, poor sleep quality, and physical inactivity (Holt-Lunstad et al. 2015; Kandler et al. 2007; O'Súilleabháin, Gallagher, and Steptoe 2019; Pantell et al. 2013; Staehelin et al. 2012). Living alone is, in itself, a risk factor for social isolation, loneliness, and related health decline (Finlay and Kobayashi 2018; Shimada et al. 2014). Measures were taken to combat both older adult isolation and loneliness during the pandemic (Sayin Kasar and Karaman 2021), but older adults who lived alone still became more isolated than those living in other household composition types (Sepúlveda-Loyola et al. 2020).

2.3 Assistance

Unmet need for care increases the risk of a range of negative health impacts, including falls, emergency room trips, inpatient hospitalizations, nursing home admission, and increased mortality (Desai, Lentzner, and Weeks 2001; Hass et al. 2017; Sands et al. 2006; Weeks, Keefe, and Macdonald 2012). Professional support can be prohibitively expensive to pay out-of-pocket, and Medicare does not fund long-term assistance for ADL (Activity of Daily Living) needs such as bathing or dressing, or IADL needs (Instrumental Activities of Daily Living) such as housekeeping or meal preparation. Public support for the long-term care of the lowest-income adults through Medicaid varies significantly between states (Eiken et al. 2015), and services are typically narrowly targeted to people with specific needs and significant economic limitations. Further, qualification for public support does not guarantee service recipiency, with 75 percent of states operating a waiting list with wait times that average more than three years (Musumeci, Watts, and Chidambaram 2020).

As a result, many lower-income older adults rely on unpaid family members, friends, and neighbors to obtain needed personal care and support. Household composition can shape the assistance available to older residents as family members or others living in the home can provide support (Keene and Batson 2010). Co-resident arrangements create more opportunities for an older adult to access these supports and co-resident older adults who are less reliant on professional caregivers are also less exposed to employment market gaps and fluctuations.

2.4 Research Question

This research first considers financial resources and supportive services by household type prior to the pandemic. Analyses then assess resource adequacy or rates of loss in 2020 compared to prior years, framing COVID-19 as a stress-test to detect associations between resilience and household composition. An older adult is resilient if their ability to meet financial and supportive service needs does not decline in the presence of pandemic disruptions.

3. Analysis

3.1 Data

The project relies on the Health and Retirement Study (HRS). The HRS includes 20,000 respondents over age 50, with new birth cohorts added every third wave. Wherever possible, variables produced by RAND were incorporated into the analysis; however, in some cases, we used core survey variables. This study also used the HRS supplemental COVID survey conducted in 2020, which included 3,200 respondents from a subsample of households scheduled for enhanced interviews from that wave. These supplemental surveys were conducted in June and September 2020, a period before vaccinations were available. Given the rapid changes of the pandemic over that year, we interpret these survey results as a snapshot of a particular point in time and recognize that they do not characterize the arc of changes that occurred throughout the pandemic period. Field dates of the core survey ranged from March 2020 to May 2021, so these responses will encompass a wider variety of pandemic experiences from early shutdown to general vaccination availability.

These data were used to produce a profile of resources by household composition type at baseline (prior to the pandemic). Results will first describe these pre-pandemic tabulations. Additional tabulations were produced to describe pandemic experiences by household composition type. These are shared in the second section of the results. Finally, statistical analyses were conducted to assess whether pandemic experiences differed significantly by household

¹ Variables in the RAND longitudinal files are cleaned and imputed to provide better estimates of individual and household-level experiences. These derived variables include a range of topics such as demographics, health, health insurance, Social Security, income, and assets. However, at the point of analysis, RAND had yet to release its file for the 2020 survey. As a result, researchers were not always able to rely on RAND variables for longitudinal analyses.

composition type when controlling for other explanatory factors. These analyses are described, along with their results, in the third component of the results section.

3.2 Variables

Since we propose that the household is an important unit of analysis for older adult adaptation and resilience, we begin by differentiating a set of household composition types. The single-person household is defined as any adult aged 50 or older who lives alone. We describe spouse/partner households as any adult aged 50 or older living with their spouse or partner but without anyone else in the home. Co-resident households described the rest of the sample of adults aged 50 or older. About a third of 2018 households fit into each category (**Table 1**).

Table 1: Distribution of Sample by Household Composition Type

	Single	Partner	Co-	Co-Residence Types						
			Residence	Relatives,	Relatives, Minor	Non- Relatives	Minors Only			
				Adults	Children	Only	, , , , , , , , , , , , , , , , , , ,			
				Only						
Total Sample (Number)	21,265	20,957	24,004	13,507	5,725	1,426	3,346			
Full Sample (Weighted Share)	31	37	32	19	7	2	4			

Households By Age Band

	Age 50-64				Age 65-74	Age 75 and Over			
	Live Alone	Partner	Co- Resident	Live Alone	Partner	Co- Resident	Live Alone	Partner	Co- Resident
Household Composition (Number)	5,408	6,988	14,488	4,795	6,296	4,431	9,097	5,523	5,085
Household Composition (Weighted Share)	21	32	47	29	39	32	47	30	24

Co-Residents by Age Band

	Co	Co-Residents Age 50-64			Co	Co-Residents Age 65-74				Co-Residents Age 75 and Over			
	Rel, Adults Only	Rel, Plus Minor Child	Non- Rels Only	Minors Only	Rel, Adults Only	Rel, Plus Minor Child	Non- Rels Only	Minors Only	Rel, Adults Only	Rel, Plus Minor Child	Non- Rels Only	Minors Only	
Household Composition (Number)	6,960	3,839	804	2,885	2,685	1,096	314	336	3,862	790	308	125	
Co-Residence Types	20	9	2	7	14	5	2	2	15	3	1	1	

Associated and Chance						1
(Weighted Share						1
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						1
of Co-Residents)						1
or co-kesidents)						1

Notes: Tabulations of respondents aged 50 and over in HRS data from 2010-2018 using household-level weights. People living alone have nobody else in the household. Partner households include a resident and partner only, and co-resident households describe all other households.

We further differentiated types of co-resident households, which are formed for several reasons. Some are arranged primarily to provide personal care or economic support to the older adult, while others allow an older adult to provide care or economic support to adult children or grandchildren. In some co-resident households, resources and benefits probably flow in multiple directions. We assume that people enter co-resident arrangements for reasons that correlate to older adult experiences, such as providing support to adult children, managing limited economic resources, and receiving personal assistance. In order to capture the different roles that older adults may play in these co-resident households (e.g., care receiving versus care giver), we identify several subcategories of co-resident households. In nearly 20 percent of households, residents were all over 18, and at least one person was related to the older adult. Seven percent of households included a relative of the older adult and also a child under 18. In 2 percent of households, an older adult lived only with other adults who were not their relatives. And finally, in 4 percent of households, the older adult lived only with a minor child, suggesting they were likely caregiving grandparents.

To avoid over-representing larger households, we randomly selected one household member (either the respondent or partner) to include in the analysis and follow over time. When we describe individual-level characteristics such as age, we are focusing on this household member. However, income variables and some variables from the COVID survey are assessed at the household level. Our analysis included only older adults who lived in a community setting, so a household will not appear in a given wave if the flagged individual moved into a nursing home or died in that wave. If a household splits, such as by divorce, we follow only the flagged individual into their new household.

3.3 Descriptive Analysis of Baseline Conditions

We begin by comparing household composition types between 2010 and 2018 to construct a prepandemic picture of the vulnerabilities or protective factors associated with each household composition type. While older adults are roughly evenly distributed between the three major household composition types, trends diverge by age band (**Table 1**). With advancing age, single-

person households become much more common, more than doubling in prevalence from 23 percent of respondents under age 65 to 47 percent of respondents aged 75 and older. As a result, single-person households are also older, with an average age of 71.

Older co-residents are a smaller share of all older adult household arrangements, falling from 41 percent of respondents aged 50-64 to 24 percent of households aged 75 or older. With an average age of 65, co-residents are also the youngest, and among co-residents, the lowest average age is among residents of households that include minor children. A substantial proportion of these younger co-residents are likely providing economic support or caregiving assistance to others in the household. However, only around a third of all co-resident households included a child under 18.

More older adults in co-resident households were Black or Hispanic.

Older adults who are Black or Hispanic are more likely to have experienced lifelong disparate impacts associated with education, income and employment, housing, health, and healthcare, so it is instructive to identify correlates of race and ethnicity with household composition. We find that a larger share of both Black and Hispanic residents clustered into coresident households of all types (**Appendix Table 1**).²

Co-residence was particularly prevalent among Hispanic adults (**Figure 1**). Compared to 28 percent of respondents who were neither Black nor Hispanic, more than half of Hispanic respondents lived in this household type. Co-residence was especially common for Hispanic adults between the ages 50 and 64 and accounts for 60 percent of those who lived in this arrangement, while 45 percent of older Black adults also lived in co-residence. Black and Hispanic adults had similar co-residence patterns, except that Hispanic older adults were 7 percentage points more likely to live in a household with a child.

² The sample size as well as HRS public data parameters did not support further analysis of groups such as Asian adults or adults of another race or ethnicity.

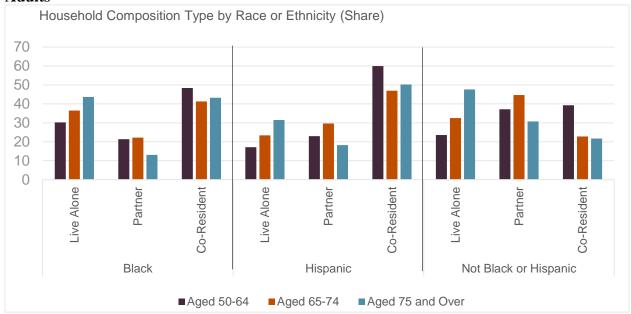


Figure 1: Co-Residence was Particularly Prevalent Among Black and Hispanic Older Adults

Note: Tabulations of respondents 50 and over in HRS data from 2010-2018 using household-level weights. People living alone have nobody else in the household. Partner households include a resident and partner only, and co-resident households describe all other household composition types. See Appendix Table 1 for sample sizes.

With advancing age, the total number of older adults living in co-residence fell (**Table 1**). However, the share of Black and Hispanic older adults in co-residence remained more stable by age band than non-Black, non-Hispanic older adults. Partner households were also more prevalent at younger ages, both by number and share. Older adults who were not Black or Hispanic were more likely to live in partner households at any age. On the other hand, single-person households became more common with age for all household types—but adults aged 75 and older who were not Black or Hispanic were particularly more likely to live alone, reducing their access to co-resident caregivers or economic efficiencies gained by household economies of scale.

Partner households had greater income and assets.

Partner households were much more likely to own their homes than the other two housing composition types. This is important because homeowners are less exposed to market forces that drive housing cost increases, and housing assets can also be leveraged to weather economic disruptions. The rate of homeownership of partner households was nearly 90 percent, with just over 10 percent renting. In contrast, nearly a third of single-person households and 20 percent of co-residents rented their homes. Unsurprisingly, older adults living in co-resident household types were also most likely to live rent-free. These rent-free arrangements occurred in around 10 percent

of all co-resident household types. A small share (2 percent) of households in which only a minor child lived with an older householder had their housing costs paid by others, which was similar to the rate among older adults living alone or with a partner (**Appendix Table 2**).

Older adults living alone had the lowest median income among the three household types at about \$23,000. Co-resident household median income was around \$42,000. In contrast, partner household income was just under \$70,000, and single-person households were just \$25,000. Among co-resident households, those that included an adult relative plus a minor or an adult relative only had similar median incomes of about \$37,000 and \$40,000. Median income was lower for those sharing a household with only unrelated adults, at around \$28,000, and was much higher for older adults living with a minor only, at \$72,000. These householders were younger and had much higher rates of employment. The size of the co-resident household also varies widely; some co-resident households were quite large, ranging up to 14 occupants. Even considering economies of scale, some of these complex households may struggle to meet the economic needs of all residents.

Social Security made up a larger share of partner household income.

The HRS provides an estimate of Social Security income from all programs, which we used to examine the relationship between social security benefit recipiency and household income by household type. Older adult Social Security benefits recipiency rates were similar between household type, but total benefits received in partner households were more than three times the benefits totals for people living alone. Less than half of co-resident households, who were generally younger than the other two types, received any Social Security income in 2018, with the total average benefit amount similar to those living alone. While average total Social Security benefit amounts were similar across different co-resident household types, benefit recipiency rates were higher among co-resident households without children, with half of older adults living only with adult relatives receiving Social Security benefits compared to just over 20 percent of households with only a minor child. Residents living in households without a minor child tended to be older than the other co-resident types.

Though average income fell after age 65 for all household types, the total amount of Social Security remained the same for older adults living alone for 65- to 74-year-olds and households aged 75 and older, and it falls somewhat for aging co-resident households. As a result, SSA programs made up a much larger proportion of the income for older adults living in partner

households than other household composition types. While partner households over age 65 have twice the income of single-person households, 43 percent of that higher income is from Social Security programs, while for older adults living alone, only 25 percent of income comes from Social Security programs. Partner households, the highest income household type, appear to be more heavily dependent on Social Security benefits than the other household composition types (**Figure 2**).

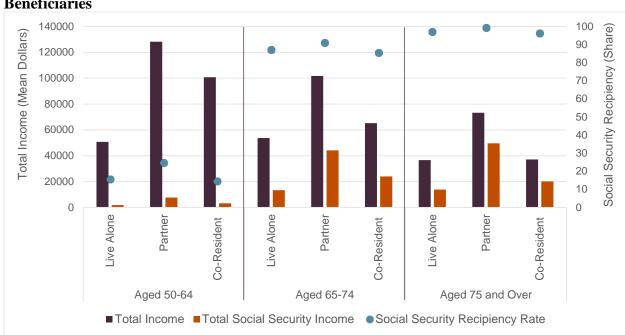


Figure 2: Partner Households were Highest Earning and Greatest Social Security Beneficiaries

Note: Tabulations of HRS 2010-2018 data using household weights. Total income uses the mean of RAND total household income variable, and total Social Security income is the mean of RAND variable that sums benefits across Social Security programs. Recipiency rate is the share of all respondents who received any income from a Social Security program. People living alone have nobody else in the household. Partner households include a resident and partner only, and co-resident households describe all other household composition types.

This was particularly true for older adults no longer in the labor force. With both partners unemployed, a partner household receives about 20 percentage points greater share of income from Social Security than a co-resident household and about 35 points greater than an older adult living alone. Older adults living alone were also least likely to be employed, at just 20 percent, which is less than half the rate of co-residents. Partner households were most likely to be employed at a rate of just over 40 percent. While retirement can reduce income, retirement could also insulate

households from pandemic-related economic disruption because income does not depend on employment.

Functional difficulties were common among older adults who lived alone.

Difficulty with activities of daily living (ADLs) is a strong indicator of an older adult's need for support and assistance. To assess this need, we used a RAND variable that assesses the reported need for assistance with tasks including using the toilet, getting in or out of bed, eating, bathing, walking, or dressing. To better understand differences by household composition, we first examined all respondents aged 50 and older. People living alone were more likely to experience a functional difficulty (21 percent) than people living in the other two household composition types. People living in a partner household were least likely to need assistance (11 percent), while 18 percent of co-residents needed assistance. This share ranged across co-resident types, from a high of 23 percent of older adults living with non-relative adults to a low of 9 percent of those living with adult relatives only.

Functional difficulty became more common with age for all household composition types (**Figure 3**). However, while the share of partner and single-person householders needing assistance rose by less than 12 percentage points across age bands, the share of co-residents experiencing functional difficulties rose much more steeply, from 13 percent of co-residents under age 65 to 35 percent of co-residents aged 75 or older. The much larger share of functional difficulties at older ages likely reflects the different drivers of co-residence that dominate over the life course. In the youngest bracket (under age 65), the household composition was more likely focused on the economic support of other younger members. In the oldest bracket (over age 74), co-resident arrangements were likely focused on the support of the older adult.

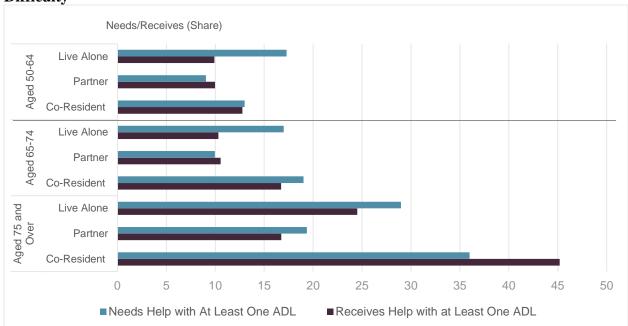


Figure 3: A Significant Share of Older Adults Living Alone Experienced a Functional Difficulty

Note: Tabulations of HRS 2010-2018 data using household-level weights. ADLs describe activities of daily living which include dressing, bathing, transferring, toileting, and eating. People living alone have nobody else in the household. Partner households include a resident and partner only, and co-resident households describe all other household types.

Single-person household residents relied more on professional support and received less assistance overall.

We then consider how much assistance older adults in each household type received. The amount of support and assistance recipiency diverged considerably by composition type (**Figure 3**). A larger share of all co-resident households received assistance (15 percent) as compared with those living alone (12 percent) or with a partner (10 percent). When focused on respondents who received any assistance, older adults in co-residence received twice as many hours of support in the previous month as those who lived alone and over 50 percent more than those who lived with a partner. Yet when assistance was needed with at least one ADL, all household types needed assistance with a similar average number of ADLs. Despite similar rates of functional difficulty and the number of ADLs in need of support, older adults living alone appeared to receive much less personal assistance than older adults living in more complex households. Among the co-resident categories, those living only with non-relatives received the most hours of assistance, and those living only with a minor received the fewest by at least half.

As might be expected, older adults living in co-residence were most likely to rely on their adult children or children-in-law for assistance (**Appendix Table 3**). This was especially the case for those living with adult relatives and no children in the household. Older adults in co-resident households were also more likely than others to rely on grandchildren for assistance, particularly when minor children lived in the home. Partner households were much more likely to rely on a partner for support than other household composition types, and older adults living alone utilized professionally provided support at a much higher rate than other types. Support from someone unrelated was also common for this group but was particularly important for people living in co-residence with non-relatives, suggesting that this household arrangement may often be designed to provide care to an older resident.

3.4 Pandemic-Period Financial Conditions

Partner households experienced greater pandemic-period income stability.

To conduct an analysis of pandemic financial conditions, we fit a model using a dependent variable from a question on the COVID survey supplement that asked whether household income changed because of the pandemic. The COVID survey supplement was conducted on a sample of respondents. It categorized income change as either increasing, decreasing, or staying the same. The main independent variable of interest was a three-part household composition type, with other covariates including the individual's age squared, an indicator for individuals who need help with at least one ADL or IADL, tenure (owner, renter, lives with another), and an indicator if an individual receives any public health insurance (Medicare, Medicaid, or VA coverage).

The multinomial logistic regression used the form:

$$y_{it} = \alpha + \beta_1 Household Comp_i + \beta_2 X_{it} + \varepsilon_{it}$$
.

We used the RAND income variable to create a lagged categorical variable indicating household income by terciles in 2018, prior to the pandemic, then separately assessed the model for each tercile. Using co-resident households as a base category, we then assessed the marginal effects of household composition type. There were no significant differences in pandemic-period income change by household composition type for older adults who were living in the lower or higher income categories in 2018.³ However, middle-income co-residents were more likely than

³ Results will be provided upon request.

the other household composition types to lose income during the pandemic and less likely to have their income stay the same. Marginal effects of the analysis demonstrated that both older adults living alone and partner households in this income bracket were about 8 percent more likely than co-residents to retain the same income through the early pandemic (p<0.05 for single-person households and p<0.01 for partner). Partner households were also about 6 percent less likely to experience income loss than co-residents (p<0.05) (**Table 2**).⁴

Table 2: Middle-Income Co-Residents Were More Likely to Experience Income Loss During the Pandemic

Marginal Effects of Household Composition Type on Pandemic-Period Income Change by Income Tercile

(1) 2018 Income Und	er \$21,000	(2) 2018 Income \$21,	,000-55,000	(3) 2018 Income Over \$55,000		
Live Alone Income Same	0.0403 (0.0295)	Live Alone Income Same	0.0791* (0.0341)	Live Alone Income Same	-0.00764 (0.0390)	
Income Increased	-0.0173 (0.0166)	Income Increased	-0.0195 (0.0197)	Income Increased	-0.00225 (0.0210)	
Income Fell	-0.0230 (0.0263)	Income Fell	-0.0596 (0.0313)	Income Fell	0.00989 (0.0362)	
Partner Income Same	-0.0104 (0.0389)	Partner Income Same	0.0788** (0.0305)	Partner Income Same	0.0255 (0.0273)	
Income Increased	-0.0161 (0.0199)	Income Increased	-0.0221 (0.0171)	Income Increased	-0.00969 (0.0156)	
Income Fell	0.0265 (0.0358)	Income Fell	-0.0567* (0.0283)	Income Fell	-0.0352 (0.0247)	
N	1572	N	1583	N	2008	

Standard errors statistics in parentheses * p<0.05, **p<0.01, *** p<0.001

⁴ As a robustness check, we analyzed the entire sample and incorporated a three-category lagged income variable into the model itself. In an analysis that included the 2018 categorical income as a control variable, the same categories demonstrated significant effects in the same directions as the analysis presented (stratified into three models by income), though with somewhat smaller effect sizes.

Note: Marginal effects of this multinomial regression examines whether, as a consequence of the pandemic, income remained the same, increased, or fell in 2020 by household composition type. Other factors are held constant. The baseline category was coresident households. Interpret findings as follows: middle-income partner households were 7.9 percent more likely to have steady pandemic-period income compared to baseline.

Co-resident households experienced more financial hardship during the pandemic.

Financial hardships were also more common among co-resident households, with single-person households consistently ranking second. The most common financial hardship was missing a rent or mortgage payment, with 8 percent of co-residents and 5 percent of single-person households reporting this problem. The next most common challenge was missing a credit card or debt payment, experienced by 6 percent of co-residents and 5 percent of single adults. A lack of money for food was the third most common difficulty, experienced by 5 percent of co-residents and 4 percent of single adults (**Figure 4**).

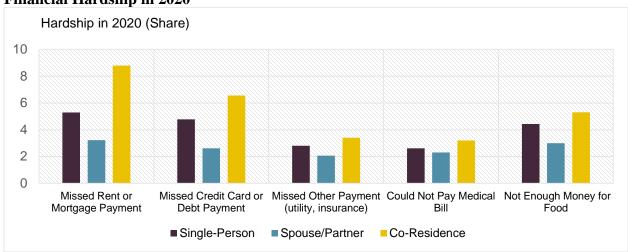


Figure 4: Co-Resident and Single-Person Households Experienced Higher Rates of Financial Hardship in 2020

Note: Analysis of HRS 2010-2018 using household weights. People living alone have nobody else in the household. Partner households include a resident and partner only, and co-resident households describe all other household types.

The core survey includes additional hardship indicators, including residents eating less food, taking less medicine, or getting less medical care for financial reasons. These questions identified resources that became unaffordable and/or were rationed sometime in the past two years. Responses in 2020 suggested more financial hardships in single-person and co-resident households than in partner households. While 7-8 percent of single-person and co-resident households ate less, skipped medication, or missed medical care, only 2-6 percent of partner households had to ration these resources (**Table 3**).

Table 3: Pandemic Period Income Change and Hardships 3a: Pandemic Period Income Change and Financial Hardships

		Live	Partner	Co-		Co-Residen	ce Types	
		Alone		Resident	Relatives, Adults Only	Relatives, Minor Children	Non- Relatives Only	Minor Child Only
Income Change	Increase	4	6	6	6	6	6	6
(Share Reporting)	Loss	15	17	23	20	28	21	28
Hardships	Ate Less	7	2	7	7	8	10	7
(Share Reporting)	Skipped Medication	8	6	8	8	9	11	7
	Missed Medical Care	7	4	7	7	8	8	6

3b: Co-Resident Pandemic Period Financial Hardships by Age Band

		Age 5	50-64			Age 65-74				Age 75 and Over			
Shares Reporting	Rel, Adults Only	Rel w/ Minor Child	Non- Rel Only	Minor Child	Rel, Adults Only	Rel w/ Minor Child	Non-Rel Only	Minor Child	Rel, Adults Only	Rel w/ Minor Child	Non-Rel Only	Minor Child	
Ate Less	9	14	14	11	6	8	7	7	3	4	1	10	
Skipped Medication	13	15	18	13	11	13	10	8	6	9	3	12	
Missed Medical Care	12	14	15	13	6	6	7	4	3	4	3	9	

Note: HRS analysis of 2020 data. The income change variable reports results from the COVID-19 survey supplement and sample was too small to examine by co-resident type. The financial hardship variables are core survey variables which ask if a respondent ate less, skipped medication, or missed medical care for reasons of financial unaffordability. People living alone have nobody else in the household. Partner households include a resident and partner only, and co-resident households describe all other household types.

3.5 Pandemic-Period Health and Assistance

Co-resident households were more exposed to virus while single-person households were lonelier.

About a third of older adults living alone felt lonely in 2020, up a few percentage points from the 2018 survey. Co-resident and partner households were not immune to loneliness, but rates were lower, at less than 20 percent for co-residents and 11 percent for partners, and remained basically flat between 2018 and 2020. Adults living alone were also more likely to report feeling sad, particularly at younger ages, with higher rates experienced by those between ages 50 to 64. By age 75, rates of depression and sadness were fairly similar between single-person and co-resident household types.

While loneliness was lower for co-residents, COVID infection rates were higher (**Table 4**). Nearly half of all infections recorded during the survey supplement, conducted in the summer of 2020, occurred among older adults living in co-residence. Rates were higher for households that

included working-age adults, with about a 6.5 percent rate of infection by September 2020 as compared to a roughly 4 percent infection rate for those living alone or in partner households.

Table 4: Pandemic Period Health and Mental Health Hardships

Table 4a: Pandemic-Period Health and Mental Health Hardships

		Live	Partner Co-		Co-Resider	nce Types		
		Alone		Resident	Rel, Adults Only	Rel w/ Minor Child	Non-Rel Only	Minor Child
COVID	Number	12	57	171	105	45	8	13
Infections	Distribution	5	24	71	44	19	-	5
	Rate	4	2	5	5	6	-	4
Mental Health	Felt Depressed	17	10	16	16	18	20	13
Hard-	Felt Lonely	31	11	18	18	17	26	14
ships (Share)	Felt Sad	25	17	22	22	24	26	20

Table 4b: Pandemic-Period Health and Mental Health Hardships by Age

			Under 65			65-74		75 and Over			
		Live Alone	Partner	Co- Resident	Live Alone	Partner	Co- Resident	Live Alone	Partner	Co- Resident	
COVID	Number	7	34	98	1	17	51	4	6	22	
Infections	Distribution	-	25	71	-	25	74	-	-	69	
	Rate	-	2	5	-	2	5	-	-	3	
Mental Health	Felt Depressed	19	12	16	17	9	17	15	9	15	
Hard-	Felt Lonely	30	12	17	30	9	19	19	20	23	
ships (Share)	Felt Sad	28	20	24	26	16	21	22	15	21	

Table 4c: Co-resident Pandemic-Period Mental Health Hardships by Age

	Under Age 65				Age 6	5-74		Age 75 and Over				
	Rel, Adults Only	Rel w/ Minor Child	Non- Rel Only	Minor Child	Rel, Adults Only	Rel w/ Minor Child	Non-Rel Only	Minor Child	Rel, Adults Only	Rel w/ Minor Child	Non-Rel Only	Minor Child
Felt Depressed	17	17	23	12	16	21	-	-	14	22	-	-
Felt Lonely	19	16	26	13	17	20	28	23	18	19	23	21
Felt Sad	24	24	29	20	19	25	22	23	19	23	28	14

Note: Analysis of 2020 HRS data. The income change variable reports results from the COVID-19 survey supplement and sample was too small to examine by co-resident type. Cells under 10 observations which represented a nonzero share are coded as missing share values. The mental health hardship variables are core survey variables. People living alone have nobody else in the household. Partner households include a resident and partner only, and co-resident households describe all other household types.

Disparities in pandemic-period loss of support and assistance by household composition type and race or ethnicity.

Older adults living alone may have received less support and assistance in 2020 compared to previous years. The variable measuring hours of help came from core survey questions about

the typical number of days and daily hours of support received from each caregiver. All hours were summed to reach a single monthly value, and since multiple assistants could help simultaneously, such as with one providing in-person care while another ran errands, a person might report more hours of support than total hours in a day. On average, 150 respondents each wave (or about 5 percent of respondents who received any help) reported receiving more total hours of assistance than total hours in the month, implying simultaneous caregivers.

The total hours of support remained fairly steady over the waves for all but older adults living alone in 2020 (**Figure 5**). When comparing average hours of support from 2010 through 2018 to support received in 2020, the average support held fairly steady for partner and co-resident households, while older adults living alone received an average of 21 fewer hours of support in the months of 2020. In fact, 55 percent of single-person households aged 75 and older received less help in 2020 than in 2018. In addition, the share of single-person households that received any help fell from 71 percent in 2018 to 60 percent in 2020, while the share of partner households receiving any help jumped from 74 percent to 83 in that same period. Assistance in co-resident households remained steadier with a 4 percentage point decrease in the share that received help in 2020, possibly reflecting a change in doubling up for economic reasons.

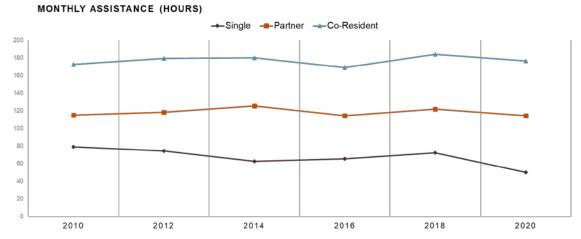


Figure 5: Total Monthly Hours of Help by Household Composition Type

Note: Analysis of HRS data 2010-2020. Total hours of help were added across reported helpers for an average monthly total. People living alone have nobody else in the household. Partner households include a resident and partner only, and co-resident households describe all other household types.

Statistical analysis of pandemic assistance suggests that Black and Hispanic older adults who lived alone had fewer total hours of assistance in 2020.

To better assess pandemic-period trends in support and assistance, we model changes in total hours of help received during the pandemic, comparing waves from 2010 to 2020. The measure for hours of help was constructed by using a set of core survey variables which inquire about the total hours of support received from each helper in the past month. This dependent measure was compared over waves by household composition type. The independent variable was an interaction between the household composition type and wave. The model controlled for age as a squared term, race and ethnicity as a binary indicator for a respondent that identified as either Black or Hispanic, tenure, income quintile, recipiency of any government insurance as a binary indicator, receipt of any professional support as an indicator, and any reported need of support with any ADL or IADL as a binary indicator.

We fit a regression using the form:

 $y_{it} = \alpha + \beta_1 (Household\ Comp_i * Year_t) + \beta_2 Household\ Comp_i + \beta_3 Year_t + \beta_4 X_{it} + \epsilon_{it}$ with the treatment framed as the interaction between household composition type and year. Standard errors were clustered at the household level. This analysis did not detect any differences in pandemic experience in help received by household composition type.⁵

We then refined the analysis to better spotlight groups we expected to be more vulnerable to potential unmet needs. These included lower-income older adults who were more likely to need some among of personal care support but had fewer resources to purchase healthcare or personal assistance, and also Black or Hispanic older adults who often have systematically different healthcare experiences. We restricted the analysis to respondents who received any help, had an income in the bottom three quintiles (less than about \$60,000 each year), and identified as either Black or Hispanic. There were just under 3,500 participants who fit these constraints. Those lower to middle-income older adults of color received 59 fewer hours of monthly support in 2020 as compared to the baseline category of co-resident households in the base year 2010 (p<0.05) (**Table 5**). Other years showed no significant differences in hours of help from the base category, suggesting effects were concentrated in 2020.

⁵ Regression results can be provided upon request.

Table 5: Total Monthly Hours of Assistance

Regression Results of Change in Monthly Hours of Assistance by Household Composition Type and Year

	(1) Hours Help
Live Alone	
Live Alone 2012	-51.97 (33.9)
Live Alone 2014	-45.83 (25.12)
Live Alone 2016	-13.29 (26.45)
Live Alone 2018	-26.13 (26.18)
Live Alone 2020	-59.41* (26.30)
Partner	
Partner 2012	-51.97 (33.97)
Partner 2014	-45.83 (40.11)
Partner 2016	-29.54 (38.17)
Partner 2018	-29.13 (39.99)
Partner 2020	-10.52 (44.38)
N	3437

Standard errors in parentheses

Note: This regression used HRS data to examine total hours of assistance received between 2010 and 2020 and was restricted to respondents who received any help, had an income in the bottom three quintiles (less than about \$60,000 each year), and identified as either Black or Hispanic. The baseline category was co-resident households and the year 2010. Other variables are held constant. Interpret findings as individuals living alone received 62.78 hours less assistance in 2020 as compared to baseline.

^{*} p<0.05, ** p<0.01, *** p<0.001

To ensure that these effects were not driven by extreme outliers, we Winsorized the hours of help variable, dropping any respondents from the analysis who reported over 1,000 hours of care each month. This reduced the sample by 115 respondents. Overall effects of the analysis remained the same, though the magnitude of effect tempered to 46 fewer hours of less help each week experienced by middle and lower-income older adults of color who lived in single-person households and received some personal assistance as compared with their co-resident counterparts. The finding suggests that older adults living alone may have had a harder time obtaining support in 2020, and disparities in these hardships were particularly experienced by lower-income Black or Hispanic older adults who experienced health challenges.

Statistical analysis of pandemic assistance suggests co-residents relied less on support outside the home during the pandemic.

Since people living alone appear to have had a distinct experience with support and assistance than people living in co-residence, we designed a model to explore whether differences in assistance received may have been related to the availability of younger and healthier supports within the home. We used a COVID survey supplement question that asked whether, because of the pandemic, respondents relied on support from outside the home to run errands and complete chores. We fit a logistic regression model that assessed whether the respondent received additional assistance with chores from outside the home during the pandemic. We used the approach:

$$y_{it} = \alpha + \beta_1 Household\ Comp_i + \beta_2 X_{it} + \varepsilon_{it}$$

with the dependent variable being a reliance on others outside the home and with household composition as the independent variable. Control variables included a squared age term, tenure, an indicator for a respondent who identified as Black or Hispanic, income quintile, a binary indicator for recipiency of publicly funded health insurance, an indicator for any professional personal assistance received, and finally a flag for respondents who needed help with any ADL or IADL. Standard errors were clustered at the household level.

The marginal effects of this regression suggested that respondents to this 2020 survey supplement question who lived alone were about 22 percent more likely to rely on help from outside the home because of the pandemic than respondents who lived in co-residence. There were no significant differences between co-resident and partner households (**Table 6**). Changes in

assistance received during the pandemic were largely concentrated in support living in another household.

Table 6: Single-Person Households Received More Pandemic-Related Assistance with Chores from Outside the Household than Co-Resident Households

Marginal Effects of Total Assistance Received by Household Composition Type

	(1)
Live Alone	0.221*** (0.0405)
Partner Household	-0.00403 (0.0457)
N	877

Standard errors in parentheses

Note: This regression used HRS data to examine total hours of assistance received between 2010 and 2020. The baseline category was co-resident households and the year 2010. Other variables are held constant. Interpret findings as individuals living alone received 62.78 hours less assistance in 2020 as compared to baseline.

4. Discussion

Factors such as age, race or ethnicity, and health increased the risk for older adults during the pandemic (Gao et al. 2021; Rod, Oviedo-Trespalacios, and Cortes-Ramirez 2020). This research considers whether the combination of resources associated with household composition types either moderated or increased these risks and improved residents' capacity to cope with conditions related to COVID-19. There are two stories to tell: the first about resource adequacy and the second about resource stability. Findings first confirmed that, at baseline (prior to 2020), different household composition types were systematically associated with distinct types and amounts of resources. Findings then suggested that older adults' pandemic experiences were linked to these baseline resources.

Residents of partner households were most likely to have adequate resources before the pandemic, and their resources remained more stable in 2020. They demonstrated more resilience, reporting the fewest pandemic-related challenges in meeting their financial or care needs compared to the other household types. Older adults living in partner households had more economic means prior to the pandemic. They enjoyed higher incomes and were more likely to be homeowners,

^{*} p<0.05, ** p<0.01, *** p<0.001

giving them more control over their housing costs as well as a housing asset available to leverage. Partner householders also tended to be younger and healthier, and they received more personal care support in the context of their lower level of need for assistance.

Co-residents had heterogeneous experiences. These older adults received more care and assistance at baseline compared to older adults who lived alone. This care was largely provided informally by family members, and during the pandemic, their support fluctuated at a rate less than that of single-person household residents, which was subject to professional caregiver availability. Given economies of scale and multiple income contributors, co-residents typically had more financial resources before the pandemic than older adults who lived alone. However, their income may also have been more dependent on the employment of workforce-aged co-residents, reducing their financial stability during the pandemic compared to the other household types. Co-residents experienced more pandemic-period financial hardships than other household types, reporting higher rates of difficulty paying for housing, utilities, food, medical bills, and other debts.

Older adults who lived alone had less access to both economic resources and caregivers before the pandemic compared to the other household composition types, particularly considering their greater level of need for assistance. They relied more heavily on professional caregivers, and levels and rates of assistance dropped in 2020 for Black and Hispanic single-personal household residents. While the economic resources of single-person households remained more stable than older adults living in co-residence during the pandemic, their baseline resources may have been inadequate to cope with disruption, and financial hardship rates were higher than partner households during the pandemic.

4.1 Hispanic and Black Older Adults Experienced Disparities

Older Black and Hispanic adults are especially vulnerable to unmet needs during disruption, in part because they are more likely to experience functional limitations, even controlling for circumstances such as age and socioeconomic status (Ciol et al. 2008). This analysis additionally found more Black and Hispanic older adults living alone or in co-residence, household composition types that were associated with higher rates of unmet needs or unstable resources. As a result, Black and Hispanic older adults systematically experienced less access to adequate and stable resources. Equitable policy would consider the context of household composition, the distribution of household composition types, and the implications for both finances and care and

assistance for older residents. While researchers identified some negative associations with living alone or in co-residence, service and support expansions, as well as more flexible housing policy and additional economic resources, might increase options and improve older adult housing choices.

4.2 Paid Family Caregiving Might Improve Co-Resident Financial Stability During Disruption

Single-person household residents who relied much more on professional support received much less assistance than co-residents relative to their need and lost assistance during the pandemic. Older adults, and especially those with low income, need more access to paid care in their home. Co-residents had more consistent assistance through the pandemic, but most of this support was provided by family members. An overreliance on informal care externalizes the impacts of care and can become an economic burden for households or increase caregiver strain. But in about a quarter of states, family members are not allowed to provide Medicaid Waiver services (Swartzell, Fulton, and Crowder 2022). Paying co-resident caregivers for their work might increase the economic capacity of co-resident households and improve older adults' financial stability through periods of macroeconomic strain or instability. Expanding access to paid assistance would increase care stability and buffer the household economic experience from macroeconomic job market fluctuations and also income loss related to displacement. Additionally, many older adults state a preference to age in place and may not prefer to move into a family member's house to receive assistance. Expanding access to paid family care might increase opportunities for more older adults to remain in their own homes while still receiving needed support.

4.3 Housing Policy Might Facilitate Co-Residence

Single-person households experienced more loneliness during the pandemic and struggled with lack of social engagement compared to the other household composition types. These residents may have had inadequate assistance at baseline and were more likely to lose assistance during the pandemic. Co-resident households demonstrated more stable mental wellness and support and assistance. However, subsidized housing policy does not always facilitate co-residence. Age restrictions may make it difficult for older co-residents to live in subsidized housing such as

Section 202, public housing, and other project-based housing for seniors. These rules that designate qualification and target populations may limit options for aging residents whose housing needs change over time, and older adults living in publicly subsidized affordable housing may face greater challenges jointly renting units with friends, extended family, or unrelated roommates. Affordable public housing units also tend to be smaller and are rarely designed to accommodate a larger, more complex household. Given the economic efficiencies in care delivery and mental health stability of co-residence, housing policies might better accommodate this housing option.

4.4 Single-Person Households Might Need Additional Financial Resources to Navigate Disruption

Coronavirus conditions created new costs such as pharmacy and food delivery, and future disruptions will be associated with their own unique economic costs. Single-person households had fewer economic resources at baseline to pay these costs compared with a partner or co-resident households. Support and assistance are also basic needs for many older adults. Single-person households relied more heavily on professional support and were more likely to lose assistance during the pandemic. However, broad expansions of support and assistance programs might potentially increase the availability and stability of services. Increased financial capacity might more directly improve the ability of older adults who live alone to navigate disruptions by allowing them to fill specific gaps related to both material and supportive resources as they navigate future disruptions. For instance, they might temporarily compensate for missing support by purchasing supplies such as prepared meals, taking advantage of commercial services such as pharmacy delivery, funding informal assistance by hiring a neighbor to do a chore, or evacuating to a safer, better fit, or more centrally located home for the duration of the disruption. Support and assistance needs carry an economic cost for older adults, and these needs must be considered as a component of their basic cost of living.

4.5 Social Security Programs Could Provide an Avenue to Increase Resilience

Numerous federal programs were expanded to serve a larger population or bring more resources to recipients during rapidly changing pandemic conditions. The Supplemental Nutrition Assistance Program (SNAP) expanded the target population eligible for benefits and increased the overall size

of benefits allocated (Bryant and Follett 2022). Medicare offered access to new services, funding new telehealth services for all recipients (Hamadi et al. 2022). The Coronavirus Aid, Relief, and Economic Security Act (CARES Act) provided forbearance on mortgage payments for federally assisted loans and generated funding to provide emergency assistance through to low-income renters and people experiencing homelessness (Goodman and Magder 2020). The Centers for Disease Control and Prevention (CDC) placed a moratorium on evictions of tenants unable to make rental payments (Prevention 2021). And Housing and Urban Development (HUD) offered grants to advocate for tenants at risk of eviction (HUD Expands Eviction Protection and Diversion Program With Additional \$20 Million 2022).

OASI was used primarily as a vehicle to deliver information to recipients about these other benefits expansions. The Social Security Administration (SSA) used its administrative capacity to conduct public outreach and increase awareness of economic impact payments, particularly for beneficiaries who do not file taxes and would not otherwise access the benefits which were made available to them (Financial Impact of the Coronavirus Pandemic 2020). Given the centrality of Social Security income for older adult households, the program might be an efficient vehicle to provide direct resource infusion during a crisis, particularly for older adults living alone or in coresidence who experienced more economic hardship during the pandemic and are likely more vulnerable to future disruptions.

4.6 Social Security Programs May Increase Resilience

Social Security income is important for older adults living during an economic downturn, as people adjust their age of initial benefits uptake in response to macroeconomic conditions (Rutledge, Coe, and Wong 2012). Social Security programs are also a critical source of income for older adults living in a stable economy. These payments account for at least half of the total income for 60 percent of beneficiaries, and a quarter of all older adults depend mostly or entirely on their Social Security income (Dushi, Iams, and Trenkamp 2017; Veghte, Schreur, and Bradley 2017). We found that partner households aged 75 and older had higher income at baseline, more income stability during the pandemic, and fewer economic hardships related to the pandemic compared to other household types. They also received a larger overall share of income from Social Security programs.

Yet household Social Security benefits generally fall by one-third to one-half of married partner benefits when a spouse dies (Munnell and Eschtruth 2018). Housing costs, which make up the largest share of most household budgets, are unlikely to drop by a commensurate amount (Burdick and Fisher 2007; Housing America's Older Adults 2019; Mutchler, Li, and Xu 2019). The typical amounts of Social Security income for single-person households may not be adequate to ensure economic security. These household composition types experienced more unmet needs even before the pandemic and struggled to meet needs through pandemic-period disruptions. These challenges could be related to the lower income related to housing costs as compared to partner households. This might limit the capacity of older adults to live independently, particularly with declines in health and functional ability or through any sort of macro disruption.

Comparative international research has linked social welfare regimes to older adult household composition, with more generous welfare policies associated with greater housing choice and a larger number of single-person households (Mudrazija et al. 2020; Tai and Treas 2009). Expansions of the social safety net could improve the capacity of older adults to live alone if they prefer to and increase their resilience to cope with disruption. With the population of adults aged 75 and older expected to increase by 48 percent between 2020 and 2030 (The State of the Nation's Housing 2020), many more older adults will survive their spouses and experience a resulting economic transition from a partner to a single-person household. A careful examination of income changes related to this transition might shed light on income-related housing instability and opportunities to increase the capacity for older adults to choose to live alone.

4.7 Limitations and Future Research

This analysis was broad and did not assess the impacts of specific policies. Participants represented various geographies where the impact of the pandemic likely varied and were not surveyed at the same point in the pandemic, so findings do not describe particular geographic or point-in-time experiences. Finally, sample sizes were not adequate to statistically understand the experiences of narrow demographic groups, such as older adults of color who lived in different types of coresident arrangements. Future research should examine pandemic experiences by state or regional policy, by rurality, and should carefully study and differentiate the variety of co-resident experiences of older adults by race and ethnicity. Further, older adults experience a high rate of individual disruptions ranging from widowhood to major losses of health and functional ability,

and the role of resources related to household composition should be better understood as a component of a person's capacity to navigate these experiences.

5. Conclusion

This analysis linked household composition types to older adult access to resources and to resilience during the pandemic. Older adults living alone and in co-residence had fewer resources to cope with disruptions driven by COVID-19. This created equity issues since Black and Hispanic residents are more likely to live in these more vulnerable household composition types. In the current policy environment, household composition type might be a signal of potential precarity. It could be a valuable indicator for needs assessment tools and funding formulas to consider both the stability and redundancy of resources associated with household composition, including both caregiving and finances. As the older adult population grows more numerous and more diverse, they will require practical options to meet their housing needs with dignity. Expanding economic resources and home-based care supports may increase older adults' capacity to select into their best-fit housing arrangement. In this way, health and safety net policies could fill resource gaps and ensure that older adults have adequate resources to live alone or in co-residence, even through disruptions.

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7. Appendix

Appendix Table 1: Baseline Demographics: Race, Ethnicity, and Age

By Household Composition Type

		Live Alone	Partner	Co- Resident	Total Number	Relatives, Adults Only	Relatives, Minor Children	Non- Relatives Only	Minor Child Only	Total Number
Age (mea	n)	71	67	65	1	66	63	66	59	-
Race or	Black	35	20	45	12,044	25	11	3	6	5,597
Ethnicity	Hispanic	21	24	55	7,560	28	18	2	6	4,312
(share)	Not Black or Hispanic	32	40	28	36,980	17	5	2	4	9,855

By Age Band

			Age 5	0-65			Age	65-74		Age 75 and Over			
		Live Alone	Partner	Co- Resident	Total Num.	Live Alone	Partner	Co- Resident	Total Num.	Live Alone	Partner	Co- Resident	Total Num.
Age (mean)		60	59	58		69	69	69		83	81	82	
Race or	Black	30	21	48	890	37	22	41	579	44	13	43	681
Ethnicity	Hispanic	17	23	60	521	23	30	47	342	20	25	55	207
(share)	Not Black or Hispanic	23	40	38	1,514	32	48	21	784	48	33	20	800

Co-Residence by Age

		Co	-Resident	s Age 50-6	55	C	o-Resider	its Age 65-	74	Co-Residents Age 75 and Over			
		Relatives , Adults Only	Relatives , Minor Children	Non- Relatives Only	Minor Children Only	Relatives , Adults Only	Relatives , Minor Children	Non- Relatives Only	Minor Children Only	Relatives, Adults Only	Relatives, Minor Children	Non- Relatives Only	Minor Children Only
Age (mean)		58	57	58	56	69	69	69	69	83	81	82	78
	Black	24	12	3	9	24	12	3	3	32	8	3	32
Race or	Hispanic	28	21	2	9	25	16	2	4	37	10	2	37
Ethnicity (share)	Not Black or Hispanic	13	4	2	2	21	8	2	7	15	3	1	15

Notes: Tabulations of respondents 50 and over in HRS data from 2010-2018 using household-level weights. People living alone have nobody else in the household. Partner households include a resident and partner only, and co-resident households describe all other household composition types.

Appendix Table 2: Baseline Demographics: Income and Assets

Appendix Table 2a: Baseline Income and Assets by Household Composition Type

		Live	Partner	Co-	Co-Residence by	Relationship & Age	9	
		Alone		Resident	Relatives, Adults Only	Relatives w/ Minor Children	Non-Relatives Only	Minor Children Only
Tenure	Owner	65	89	71	73	64	57	76
(share by	Renter	32	10	21	18	25	33	22
household type)	Rent Free	3	2	8	8	11	10	2
Employed (share)		35	60	60	56	61	47	80
Income (med	ian dollars)	24,800	69,337	41,743	40,000	37,909	28,380	72,200
	Social Security Benefits, if any (median dollars)		45,168	16,800	16,800	16,218	15,360	21,148
Social Securit Recipiency R	•	66	62	44	50	42	46	22
Share Income from Social Security (median)		56	65	60	42	43	54	29

Appendix Table 2b: Baseline Income and Assets by Household Composition Type and Age

-рронани							P	- 1 p c aa. 1 .8 c			
			Age 50-64			Age 65-74		Age 75 and Over			
		Live Alone	Partner	Co- Resident	Live Alone	Partner	Co- Resident	Live Alone	Partner	Co- Resident	
Tenure	Owner	60	85	72	69	92	72	66	90	65	
(share by	Renter	37	13	23	29	6	20	30	8	16	
household type)	Rent Free	4	2	5	2	2	7	4	2	20	
Employed (s	hare)	64	83	81	31	51	40	8	21	11	
Income (med	dian dollars)	29,000	86,104	60,000	28,000	66,000	33,116	20,964	45,960	20,862	
Social Securi if any (medi		11,120	28,524	16,800	14,400	48,696	19,200	13,596	48,000	14,887	
Social Securi	ty Benefits										
Recipiency Rate		16	25	15	87	91	85	97	99	96	
Share Income from Social Security (mean)		4	6	3	25	43	37	38	68	54	

Appendix Table 2c: Baseline Co-Resident Income and Assets by Household Composition Type and Age

			Age 5	50-64			Age 6	55-74			Age 75 a	nd Over	
		Rel, Adults Only	Rel w/ Minor Child	Non- Rel Only	Minor Child Only	Rel, Adults Only	Rel w/ Minor Child	Non- Rel Only	Minor Child Only	Rel, Adults Only	Rel w/ Minor Child	Non- Rel Only	Minor Child Only
Tenure	Owner	75	66	49	76	76	64	63	78	66	54	70	74
(share by	Renter	21	26	39	22	17	26	28	20	14	18	24	19
household type)	Rent Free	4	7	12	2	7	11	9	2	20	28	6	7
Employed (s	hare)	81	80	64	86	40	37	35	50	10	10	15	28
Income (med	dian dollars)	62,000	50,450	29,500	81,000	34,560	28,744	33,576	41,616	20,988	19,116	20,716	34,832
Social Securi (dollars)	ty Benefits	17,388	15,384	14,400	17,982	19,200	18,000	16,800	23,388	14,952	14,635	14,023	24,000
Social Security Benefits Recipiency Rate		16	16	14	10	87	86	75	85	97	95	94	100
Share Income from Social Security (mean)		28	30	49	22	56	63	50	56	71	77	68	69

Notes: Analysis of HRS 2010-2018 using household weights. Tenure and employment are presented as column shares (showing us the typical tenure breakdown for each household composition type). Age, income, and Social Security benefits are all characterized by their median value. Total income used the RAND household income variable. Both income and Social Security benefits are calculated at the household level and reported in dollars. Social Security benefits sum all benefits from any Social Security program

and report the median dollar value if any benefits are received. People living alone have nobody else in the household. Partner households include a resident and partner only, and co-resident households describe all other household composition types.

Appendix Table 3: Baseline Personal Assistance

Appendix Table 3a: Baseline Assistance

		Live	Partner	Co-	Co-Residence: Re	elationship & Age		
		Alone		Resident	Relatives, Adults Only	Relatives, Minor Children	Non-Relatives Only	Minor Child Only
Help Last N Hours)	Ionth (Mean	11	11	26	29	20	37	10
Received A	ny Help (Share)	12	10	15	16	16	19	9
Help Last Month, if Any (Mean Hours)		84	112	173	181	151	198	102
Primary Provider	Adult Child/ In-law	26	11	41	47	39	3	34
of ADL	Grandchild	5	2	12	10	20	2	12
Help	Professional Provided Care	40	13	13	15	7	23	7
<u> </u>	Other Relative	8	3	8	8	8	10	6
	Unrelated Other	19	4	11	8	8	48	8
	Spouse/ Partner	2	66	15	12	20	13	33

Appendix Table 3b: Baseline Assistance by Age

			<u>, </u>							
	Age 50-64	4		65-74			75 and Over			
	Live Alone	Partner	Co- Resident	Live Alone	Partner	Co- Resident	Live Alone	Partner	Co- Resident	
Help Last Month (Mean Hours)	5	8	11	7	9	22	19	21	86	
Received Any Help (Share)	7	8	10	8	9	15	21	16	35	
Help Last Month, if Any (Mean Hours)	63	103	116	82	102	146	92	134	246	

Appendix Table 3c: Co-Resident Baseline Assistance by Age

		Age 5	0-64			Age 6	5-74		Age 75 and Over			
	Rel, Adults Only	Rel w/ Minor Child	Non- Rel Only	Minor Child	Rel, Adults Only	Rel w/ Minor Child	Non-Rel Only	Minor Child	Rel, Adults Only	Rel w/ Minor Child	Non-Rel Only	Minor Child
Help Last Month (Mean Hours)	10	15	11	6	19	28	18	15	77	74	131	53
Received Any Help (Share)	9	12	14	9	14	19	15	10	36	32	37	10
Help Last Month, if Any (Mean Hours)	124	135	83	78	141	161	127	149	231	249	378	-

Note: Analysis of HRS 2010-2018 using household weights. People living alone have nobody else in the household. Partner households include a resident and partner only, and co-resident households describe all other household types. Total hours of help uses a RAND variable that sums all hours of support received. Missing cells were too small to report.



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