Minimum Social Security Benefit(s) and the Alone Stage of Retirement in the US

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AUTHOR   Lori J. Curtis, PhD
Professor, Department of Economics
University of Waterloo

Douglas Andrews, PhD
Adjunct Professor in the Department of Statistics
and Actuarial Science
University of Waterloo

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Abstract

As life expectancy and retirement years increase, so too has the proportion of Canadians and Americans working beyond "normal" retirement age (65 in Canada, 66 to receive the full Social Security monthly payment in the U.S.). The rate of increase has been similar for males and females in Canada, but one finds a sex differential in the U.S. with higher growth rates for females. The higher female growth is likely due to a multitude of factors, including females' longer life expectancy, their growing likelihood of being unpartnered as they age and higher likelihood of poverty, and design of the social security system (particularly salient for this study as the Canadian and U.S. systems differ substantially). This paper extends our current research on the Alone Stage of Retirement (ASR). Using similar methodologies to those of a previous paper, we draw from the relevant literature and current data to describe the situation of senior females in the U.S., particularly those in the ASR, as compared to males. We explore the literature with respect to alternatives to the current U.S. Social Security system and examine possible consequences of recently proposed minimum benefit programs.

Introduction

The literature recognizes three stages of retirement, early (ages 65–74 years), middle (ages 75–84 years) and late (ages 85 and older). Resource needs follow a U-shaped pattern: they are high while seniors are active, they fall in the middle stage as retirees enjoy home routines, and they are high in the late stage when health and abilities diminish.[1] Females are more likely to live longer than males, and those that marry tend to marry males who are older than themselves; many female baby boomers did not marry or divorced.[2,3] The number of seniors over the age of 80 living alone is projected to be more than 10 million by 2038.[4] Thus, a growing proportion of females will end up living alone at older ages with limited incomes when health and daily activity issues exacerbate. Toward the end of the middle and late stages of retirement, many females find themselves coping alone—the "Alone Stage of Retirement" (ASR).

The U.S. is home to the highest number of centenarians in the world, 97,000. The number of American seniors is projected to nearly double from 52 million in 2018 to 95 million by 2060, increasing the share of the total population from 16% to 23%. In 2019 the poverty rate among individuals aged 65 plus was 8.9% in the U.S. The aggregate rate hides substantial heterogeneity across subgroups within the senior population. The rate is lower (8.4%) for those aged 65–69 and 70–74 (7.4%), but substantially higher for individuals aged 75–79 at 9.2% and 11.9% for those 80 and over. Older females experience higher poverty rates than older males; females aged 80 and older had the highest poverty rate, 13.6%.[5]

Unmarried seniors generally have a higher poverty rate than those who were married and living together with spouses. Twenty-six percent of American females ages 65 to 74 lived alone in 2018. That increased to 39% among females ages 75 to 84, and to 55% among females ages 85 and older.[6] Again, unmarried senior females are not a homogenous group, with 14.4% of widows, 15.8% of divorced females and 16.9% of never-married females living in poverty. The poverty rate for married females is 4.7%.

As life expectancy and retirement[7] years increase, so too has the proportion of Canadians and Americans working beyond "normal" retirement age (65 in Canada, 66 to receive the full Social Security monthly payment in the U.S.). The rate of increase has been similar for males and females in Canada, but one finds a sex differential in the U.S.[8] with higher growth rates for females. The higher female growth is likely due to a multitude of factors, including females' longer life expectancy, their growing likelihood of being unpartnered as they age and higher likelihood of poverty, and design of the social security system.

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[1] For example, see Royal Bank of Canada, Discover the Three Stages of Your Retirement Journey, https://discover.rbcroyalbank.com/discover-the-three-stages-of-your-retirement-journey-pay-uf/ (2023).

[2] Lori Curtis and Kate Rybczynski, Are Female Baby Boomers Ready for Retirement? Population Change and Lifecourse Strategic Knowledge, Cluster Discussion Paper Series, vol. 3, issue 1, article 3, https://ir.lib.uwo.ca/pclc/vol3/iss1/3 (2015).

[3] Claudia Olivetti and Dana E. Rotz, Changes in Marriage and Divorce as Drivers of Employment and Retirement of Older Women, NBER Working Paper 22738, http://www.nber.org/papers/w22738 (2016).

[4] Jennifer Mollinsky, The Number of People Living Alone in Their 80s and 90s Is Set to Soar, https://www.jchs.harvard.edu/blog/the-number-of-people-living-alone-in-their-80s-and-90s-is-set-to-soar.

[5] Zhe Li and Joseph Dalaker, Poverty among the Population Aged 65 and Older, updated April 14, Congressional Research Service, https://crsreports.congress.gov/product/details?prodcode=R45791 (2021).

[6] Mark Mather, Paola Scommegna, and Lillian Kilduf, Fact Sheet: Aging in the United States, https://www.prb.org/resources/fact-sheet-aging-in-the-united-states/ (2019).

[7] When referring to retirement years in this paper, we mean those living at 65 years of age and older.

[8] See Courtney Coile, The Evolution of Retirement Incentives in the U.S., NBER Working Paper 25281, http://www.nber.org/papers/w25281 (2018).

Some researchers[9,10] discuss the inequity of current programs in the U.S., particularly for those with low earnings or limited to no attachment to the labor force, which tends to affect females more than males. As well, the design of the system is also reported to be inequitable across marital status. The number of programs that are available and the complexity of application processes lead to low uptake rates and difficulty in evaluating the effectiveness of the suite of programs. Simpler programs have been proposed.[6]

It is imperative that governments recognize that these programs are particularly important for senior females, especially those living in the ASR, and that current programs may not be adequate as the population ages. We will draw from relevant literature and current data to describe the situation in the U.S. We begin by describing the current situation for all seniors, then for those in the stages of retirement and finally for seniors living alone. We briefly explore suggested alternatives to the current U.S. Social Security system and examine possible consequences of proposed minimum benefit program(s).

Background

The U.S. Social Security system is multilayered as are the social security systems in many countries including Canada. It includes an earnings-related public defined-benefit (DB) pension—Old-Age, Survivors and Disability Insurance (OASDI)—and a supplemental security income (SSI) for those of "limited means."[11] The Social Security system[12,13] was near collapse when it was amended through a bill that was passed in record time via a "nonpartisan effort."[14] Although the financial viability of the OASDI program was the main motive for change, a secondary motive for some was an incentive to increase work at older ages. One announcement of the amendments included three goals: "keep the system from going broke, protect the basic benefit structure, and reduce the tax burden of American workers."[15] Although the reforms increased the age of receipt slowly over time from 65 to 67,[16] reducing the tax burden on workers increases the incentives to work.

The literature posits different conclusions on the importance of Social Security, pensions (historically DB) and private savings in supporting years after work. There is general agreement that pension plans, when available, are moving away DB and toward defined contribution (DC) and that labor force participation is

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[9] Zhe Li, Social Security: Minimum Benefits, updated June 15, 2021, Congressional Research Service, https://crsreports.congress.gov/product/details?prodcode=R43615 (2021).

[10] Pamela Herd, Melissa Favreault, Madonna Harrington Meyer, and Timothy M. Smeeding, A Targeted Minimum Benefit Plan: A New Proposal to Reduce Poverty among Older Social Security Recipients, *RSF: The Russell Sage Foundation Journal of the Social Sciences* 4, no. 2: 74–90 (2018).

[11] Denis Latulippe and John A. Turner, Social Security Retirement Policy in Canada and the United States, *Canadian Public Policy* 45, no. 4: 393–402 (2019).

[12] For an excellent historical perspective see John A. Svahn and Mary Ross, Social Security Amendments of 1983: Legislative History and Summary of Provisions, *Social Security Bulletin* 1(July): 46, 7 (1983), or for a briefer overview see Coile, The Evolution of Retirement Incentives in the U.S. (n. 8 above).

[13] Railroad employees do not participate in the Social Security program and have their own pension program. Although the Railroad Retirement and the Social Security program share elements, they also have key differences: for an excellent discussion see Kevin Whitman, An Overview of the Railroad Retirement Program, *Social Security Bulletin* 68, no. 2: 41–51 (2008). https://www.ssa.gov/policy/docs/ssb/v68n2/v68n2p41.html. The NHIS has one question regarding participation in Social Security or railroad retirement program.

[14] Svahn and Ross, Social Security Amendments of 1983: Legislative History and Summary of Provisions (n. 13 above).

[15] Ibid., p. 5.

[16] Sandra L. Reynolds and Eileen M. Crimmins, Trends in the Ability to Work among Men and Women in the Older American Population: 1997–2007, *European Journal of Ageing* 7: 249–256 (2010).

becoming a necessity in what would have historically been considered retirement years.[17] General agreement also says that the changes affect females more negatively than males. Females tend to have lower tolerance for risky investments[18] and shorter and more tenuous labor force attachment and lower earnings trajectories.[19]

Lei (2019) found that in 2013 in the U.S., compared to couples and single males, single females had the lowest incomes and wealth and most conservative investment strategies. Single females also had more dependents than single males, characteristics that lead to low prospects for good retirement incomes. Jefferson reviewed the literature and concluded that females' access to resources and well-being in retirement is and will continue to be affected by "public pensions and social security; models of care provision, including paid care and the continued provision of unpaid care; changing household structures; gender wage gaps; and the opportunity for disadvantaged females to find paid work as they grow older."[20] The financial challenges for lone parents raising children (the vast majority being female) also affects retirement savings decisions at least in part because of the high cost of child care.[21] According to Child Care Aware of America, single parents spend over 35% of median income each year on care for a child under five.[22]

Females' lower levels of labor force participation, often due to caring responsibilities, also have a major effect on their ability to save for retirement. Females are much more likely to be precariously employed in low-paying jobs without access to pensions or benefits.[23] The Society of Actuaries 2013 Risks and Process of Retirement Survey data provide information on gender patterns of work. Figure 1 shows the years males and females work or expect to work full time over their working life. Female retirees are much more likely to have worked fewer than 10 years, 10 to 19 years and 20 to 29 years. Conversely male retirees are more likely to have worked 40 to 49 years or more than 50 years. Females were as likely as males to work 30 to 39 years.

Not surprisingly, as a result of the early life circumstances of females, they are much more likely to worry about their well-being in retirement. Figure 2 indicates that female retirees are much more likely to be concerned about their short-term and long-term financial circumstances in retirement.

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[17] See, for example, Joseph F. Quinn and Kevin E. Cahill, The New World of Retirement Income Security in America, *American Psychologist* 71, no. 4: 321–333 (2016), or Coile, The Evolution of Retirement Incentives in the U.S. (n. 2 above).

[18] Shan Lei, Single Women and Stock Investment in Individual Retirement Accounts, *Journal of Women & Aging* 31, no. 4: 304–318 (2019).

[19] Curtis and Rybczynski, Are Female Baby Boomers Ready for Retirement? (n. 5 above).

[20] Therese Jefferson, Women and Retirement Pensions: A Research Review, *Feminist Economics* 15, no. 4: 115–145 (2009); quotation on p. 138.

[21] Gregory Ward, How Family Dynamics Influence Retirement Security, https://www.soa.org/49d147/globalassets/assets/files/resources/essays-monographs/2019-family-structure/2019-family-structure-ward.pdf (2010).

[22] Demanding Change: Repairing our Child Care System, https://info.childcareaware.org/hubfs/2022-03-FallReport-FINAL%20(1).pdf?utm_campaign=Budget%20Reconciliation%20Fall%202021&utm_source=website&utm_content=22_demandingchange_pdf_update332022

[23] Curtis and Rybczynski, Are Female Baby Boomers Ready for Retirement? (n. 5 above).

Figure 1
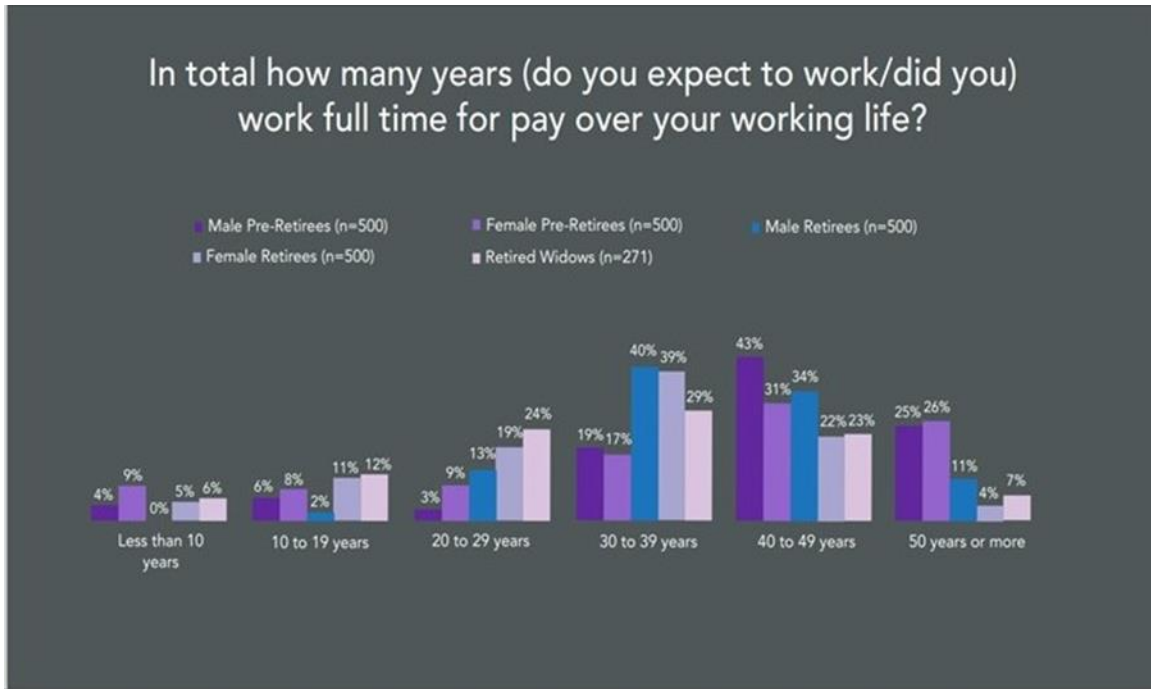
Source: Society of Actuaries, Impact of Retirement Risk on Women: The 2013 Risks and Process of Retirement Survey report, p. 10, https://www.soa.org/globalassets/assets/Files/Research/Projects/research-2013-impact-retire-risks-women.pdf (2013).

Figure 2
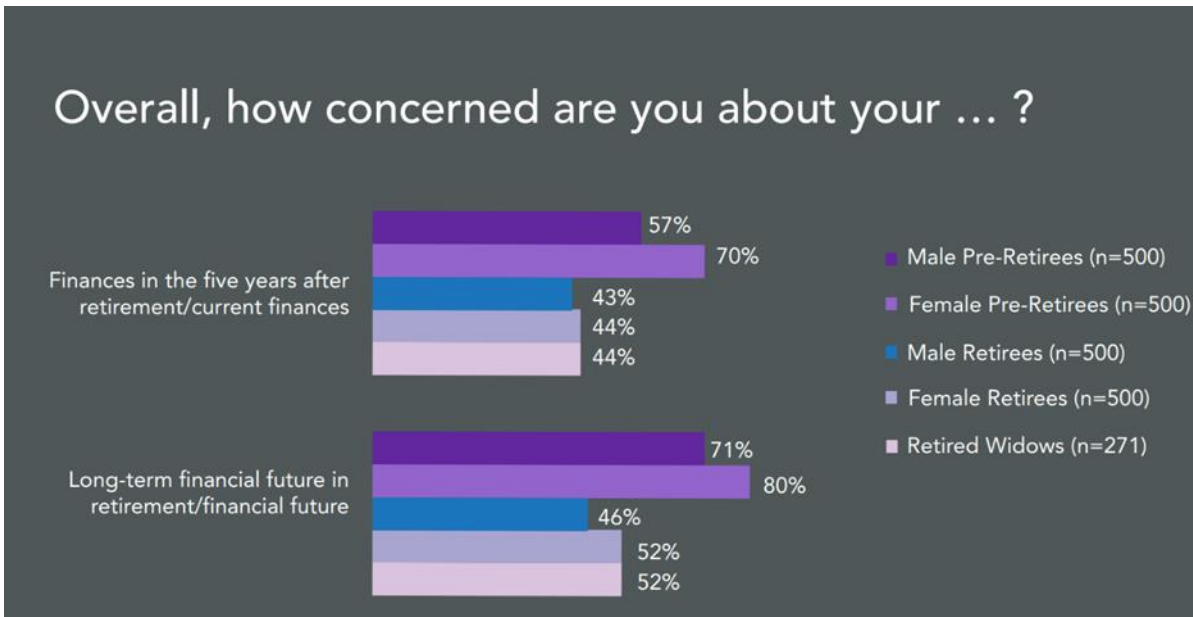
Source: Society of Actuaries, Impact of Retirement Risk on Women: The 2013 Risks and Process of Retirement Survey report, p. 10, https://www.soa.org/globalassets/assets/Files/Research/Projects/research-2013-impact-retire-risks-women.pdf (2013).

The literature paints a picture of females' retirement that is much less golden than that of their male counterparts. Females' economic and social well-being is worse than males', and, perhaps as a result, they are substantially more concerned about their circumstances in retirement. In addition to concerns

regarding disadvantages for females, the net wage replacement rate of Social Security is projected to decrease from about 41% at the beginning of the 2000s to 36% by 2036.[24] So all, and particularly females, who depend on Social Security will affected. This should be a concern for policymakers, because females make up a substantially larger proportion of those over the age of 65, and particularly as they age into the late stage of retirement.

One important aspect of retirement that is beyond the scope of this paper is the likelihood of large health-care expenditures in retirement. CNBC news[25] reported that HealthView Services projected that close to $390,000 will be needed to cover the health-care costs of a 65-year-old couple if they are in good health. This includes insurance premiums but not the costs of long-term care. The report claims that for those who rely on Social Security in retirement, health-care costs will consume approximately 43% of their benefit early in retirement and as much as 73% in the later stages of retirement.[26]

In the remainder of the paper, we explore the circumstances of U.S. seniors and the resources available through Social Security and a variety of social safety net programs such as housing and nutritional benefits using similar methodologies to those of a previous paper[27].

Data and Methods

We use the National Health Interview Survey (NHIS)[28] public use files for this study and the 2019 data because the data are for the pre-pandemic period. Although the COVID-19 pandemic affected retirement decisions and concerns for some groups, particularly lower-income earners and racial groups,[29] it also affected the ability to effectively produce surveys, thus possibly making survey files produced in the early pandemic suspect.

Briefly, the NHIS[30] is an in-person survey that provides information on the health of the civilian noninstitutionalized population of the U.S. The objective of the data collection and analysis is the monitoring of the health of the U.S. population. The survey collects a plethora of information on health, demographic and socioeconomic characteristics.

NHIS is a cross-sectional household interview survey. The target population for the NHIS is the civilian noninstitutionalized population residing within the 50 states and the District of Columbia at the time of the interview. The NHIS universe includes residents of households and noninstitutional group quarters. The NHIS uses geographically clustered sampling techniques to select the sample of dwelling units for the NHIS. The sample is designed in such a way that each month's sample is nationally representative. Data collection on the NHIS is continuous, i.e., from January to December each year. The 2019 NHIS collected basic

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[24] Jaclyn Tweedy, Social Insecurity: A Proposal to Reform the United Stats Social Security Retirement System, *Indiana International & Comparative Law Review* 28: 129.

[25] Darla Mercado, Retiring This Year? How Much You'll Need for Health-Care Costs, https://www.cnbc.com/2019/07/18/retiring-this-year-how-much-youll-need-for-health-care-costs.html (2019).

[26] HealthView Services, 2019 Retirement Healthcare Costs Brief, https://hvsfinancial.com/wp-content/uploads/2020/03/2019-Health-Costs-Brief-12.12.19.pdf (2019).

[27] Lori J. Curtis and Douglas Andrews, Challenges Faced by Canadian Women in the Alone Stage of Retirement, https://www.cia-ica.ca/docs/default-source/research/2021/rp221114e.pdf (2021).

[28] CDC, National Health Interview Survey, https://www.cdc.gov/nchs/nhis/1997-2018.htm (2018).

[29] Society of Actuaries, 2021 Retirement Risk Survey: Report of Findings, https://www.soa.org/48fd8a/globalassets/assets/files/resources/research-report/2021/risks-retirement-findings.pdf (2022).

[30] For more details see CDC, About the National Health Survey, https://www.cdc.gov/nchs/nhis/about_nhis.htm (2019).

demographics for all persons in the household, such as age, sex, race and ethnicity, as well as employment status and education for all the adults in the household. One adult and one child per household (if children were present) were selected for sample adult-child interviews. Unlike previous years, in multiple-family households, nonfamily members may have been responding about a family. Thus, we use data only from households with single families.

For the purposes of this study, the NHIS provides information on age, sex, income, sources of income, health insurance participation and receipt of nonincome subsidies (i.e., for rent and food).

Income, poverty measurement and the poverty gap are important for this study. Family income is ascertained by a number of questions, and multiple imputation methods are used to fill in any missing data.[31] Although multidimensional measurement of poverty has been introduced as a better way of measuring poverty than simply relying on income or even consumption or wealth,[32] much of the literature and policy analyses continue to rely on income measures of poverty. However, the OECD, and many countries, use a relative measure, citing the following definition:[33]

> The poverty rate is the ratio of the number of people (in a given age group) whose income falls below the poverty line; taken as half[34] the median household income of the total population. It is also available by broad age group: child poverty (0–17 years old), working-age poverty and elderly poverty (≥66 years-old). However, two countries with the same poverty rates may differ in terms of the relative income-level of the poor. The relative poverty measure is typically based on a poverty line equal to half the median disposable income, adjusted for household size.[35]

However, the U.S. uses an absolute poverty threshold to calculate poverty rates and a simpler guideline for ascertaining eligibility for some programs.[36] The thresholds and guidelines are based on cash resources (before tax and do not include noncash transfers such as food stamps), differ by family size (and type for the thresholds) and are adjusted over time (see Tables A1 and A2 in the Appendix for the thresholds and guidelines for 2019). We follow the U.S. standards and use the poverty threshold for a one-person household over the age of 65 in 2019 ($12,261). The analysis is descriptive in nature[37] using data describing functions and regression analyses.

We examine demographic and social aspects of retirement first by describing the age distribution, family size and marital status. As discussed in the previous section, marital status, family situation and age are important correlates of resources available in retirement for females. Females are typically better off when resources are available from their male partner's labor force attachment and investment strategies.

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[31] See the technical report Multiple Imputation of Family Income in 2019 National Health Interview Survey: Methods, https://ftp.cdc.gov/pub/health_Statistics/NCHs/Dataset_Documentation/NHIS/2019/NHIS2019-imputation-techdoc-508.pdf (2020) for more information on income and income imputation.

[32] S. Alkire and J. Foster, Counting and Multidimensional Poverty Measurement, *Journal of Public Economics* 95, nos. 7–8: 476–487 (2011).

[33] OECD, Poverty Rate, https://data.oecd.org/inequality/poverty-rate.htm (2011).

[34] Note that not all countries using this type of measure use 50% of the median income as the cutoff; for example, the U.K. uses 60% (Browne, James, and Andrew Hood. *Living standards, poverty and inequality in the UK: 2015-2016 to 2020-2021*. No. R114. IFS Report, 2016). This poverty measure is referred to as the Low-Income Measure (LIM).

[35] After taxes/transfers and some countries less some basic expenditures; see OECD, The OECD Approach to Measure and Monitor Income Poverty across Countries, https://unece.org/fileadmin/DAM/stats/documents/ece/ces/ge.15/2013/WP_17_OECD_D_En.pdf (2013).

[36] See ASPE, 2021 Poverty Guidelines, https://aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines/prior-hhs-poverty-guidelines-federal-register-references/2021-poverty-guidelines#guidelines for a brief and straightforward explanation (2021).

[37] All analyses are weighted using weights provided in the NHIS.

We next examine the nonincome indicators of wealth and well-being. As discussed, many non-income-based programs in the U.S. assist seniors. The most important program is health insurance. The NHIS contains a variable that describes the hierarchy of insurance status for individual. The NHIS classifies private insurance on the highest insurance class, private insurance coupled with a public insurance (dual) as the second highest), Medicare Advantage is third, Medicare is fourth, other types are classified as fifth and no insurance is ranked last.

In addition to insurance status, the NHIS provides information on whether individuals report rent subsidies or participation in the Supplemental Nutritional Assistance Program (SNAP).[38] The survey also has information on food security, whether individuals find it difficult to buy their prescriptions and whether respondents own their homes. These characteristics will provide a picture of the circumstances of male and female seniors in the different stages of retirement in addition to simply examining income. We also present data on the health status of respondents; as discussed previously, health-care costs are one of the major expenditures for seniors.

We explore the incomes of seniors living alone in retirement. We document sources of income by sex and across the stages of retirement, and we calculate the mean and median of pretax income (the U.S. uses pretax income to estimate official poverty statistics). Finally, we calculate poverty rates and poverty gaps using the official poverty threshold for singles over the age of 65.

We then analyze the impact of increasing the income available to seniors by adding one of two supplemental payments. These supplemental amounts were selected for the analysis as follows: Supplement 1 is the annual income needed to eliminate, on average, the largest poverty gap for females ($3,709 for females in the early stage of retirement); Supplement 2 is based on the additional annual income need to erase the average poverty gap for the most vulnerable females (those living alone in the late stage of retirement at $3,475). We assume that individuals living with an income that is less than the poverty threshold will receive the payments (the payment could be considered a type of basic income provided to seniors living in poverty).[39] The poverty rates and gaps are calculated post-supplement. The supplement will raise some individuals above the poverty threshold; as the goal is improving the circumstances of seniors living alone, their ex post incomes will not remove them from programs based on their ex ante incomes (like many basic income proposals).

Although the focus of the study is females living alone at older ages (late stage) of retirement, data on all retirees in all stages of retirement will be examined to draw comparisons and conclusions.

Results

The tables below present the weighted numbers of people in different groups and the percentages or proportions using weighted data. Where percentages are displayed in brackets, the round brackets present

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38 Also referred to as "food stamps."

39 The devastation of many individuals' livelihoods as a result of COVID-19 has brought attention to basic incomes, in their many forms. Academics, think tanks, advocacy groups, politicians and news outlets have all been presenting the pros and cons of different programs; see, for example, the profile of presidential candidate Andrew Yang, https://www.cnn.com/election/2020/primaries-caucuses/candidate/yang (2023), and https://basicincome.stanford.edu/. Multiple test programs and/or pilot studies on the provision of basic incomes have been implemented as of the end of 2021; see Sarah Holder, The Year the Basic Income Programs Went Mainstream, https://www.bloomberg.com/news/articles/2021-12-28/the-u-s-cities-giving-residents-direct-cash-payments#:~:text=At%20least%2020%20guaranteed%20income,to%20a%20Bloomberg%20CityLab%20analysis (2021). The amounts of the supplements used in this study are close to the lower end of the $300 to $1,000/ month provided in many basic income studies.

the percentage of the rows (the sex distribution for given characteristic). The square brackets present the percentages of the columns (the percentage of females or male or all with the given characteristic). The unweighted number of observations (see Appendix Tables A3 and A4) were small in some of the subcategories (e.g., extremely small numbers of observations in females in the late stage of retirement who receive welfare, 47; for males it is 18). Thus, showing statistically significant differences is difficult, and care should be taken in the conclusions drawn regarding characteristics with very small numbers of observations.

Tables 1 through 5 describe the living situation of all noninstitutionalized seniors living in households containing one family unit. Table 1 presents the number by age group. The number of seniors in each age group declines with increasing age. More females are found than males in each age group; the difference in the percentage (subtracting figures in round brackets) triples over time from about seven percentage points for those 65–69 to more than 21 percentage points for those over 85. Females are somewhat less likely to be in the under-80 age groups and more likely to be in the older age groups than males (square brackets). Approximately 30% of U.S. seniors live alone, as is shown in Table 2. The number of females living alone is almost double the number of males (percent in round brackets). Just under 54% of seniors live in a two-person family (male and female numbers are similar). Just under 13% of seniors live in three-person families, and a small fraction live in larger family units. Females substantially outnumber males in larger family units. Almost 85% females live in one- or two-person families, and about 64% of males do (see square brackets). However, more than a quarter of males live in three-person families, but only an eighth of females do.

Table 3 indicates that just under half of senior females are married and over 70% of males are. A substantially higher proportion of females are widowed or divorced than their male counterparts (45% vs 21%). Females make up almost 80% of widows. Fewer than 5% of male and female seniors have never married.

We start to explore our study sample in Table 4 where we focus on seniors living alone in the different stages of retirement. Recall the age ranges for early, middle and late stages are 65–74, 75–84 and over 85, respectively. Of those 65 years of age and older living alone, two-thirds are female and one-third are male. Females substantially outnumber males in each of the age groups. In the early stage, there are about 1.7 times as many females as males, and by the late stage there are 2.6 times as many. More than half of males are in the early stage of retirement, a little fewer than a third are in the middle and a sixth are in the late stage of retirement. Just under half of senior females living alone are in the early stage of retirement, just over a third in the middle and almost a fifth in the late stage. We want to note although the proportion of males and females living in each stage is not substantially different, the absolute number is.

Table 5 presents the marital status of noninstitutionalized seniors living alone by stage. A small proportion of both sexes report being married with no spouse at home; it is not stated, but we suspect the spouse may be living in long-term care. Divorced or widowed are the most likely states for both males and females. Males are eight percentage points more likely to be divorced than females in the early stage of retirement (49% vs. 41%, respectively). They are about half as likely to be widowed as females are (20% vs. 41%, respectively). Males are also more likely to be never married than their female counterparts (22% vs. 11%, respectively).

For those in the middle stage of retirement, for both males and females, the proportion reporting to be never married falls by about half. The proportion of females who are divorced falls, and the proportion of widowed climbs by over 20 percentage points. Males see a similar fall in the proportion of divorced but an increase of more than 25 percentage points in the proportion of widowed males. By the late stage of

retirement, the distribution of marital status is much more similar across the sexes with the vast majority being widowed.

The first five tables show that the social circumstances are quite different for males and females living alone. Females substantially outnumber males in all stages of retirement with the relative difference increasing over the stages. In the early stage of retirement, females are more likely to be widowed and less likely to be divorced. That difference shrinks into the middle stage and substantially disappears into the late stage when more than 75% of both males and females are widowed and about 8% are divorced. Small proportions of seniors living alone report being married or never married.

Researchers who study poverty and inequality have long stated that income is too narrow a measure and have called for a more diverse set of metrics to examine the circumstances in which people live (see previous discussion on multilevel poverty measures). Tables 6 through 8 provide some evidence on nonincome resources received by seniors who live alone and present some nonincome measures of well-being.

The insurance hierarchy data are presented in Table 6 for all seniors (first two columns of data) and then by sex and stage. Examining the entire population of seniors living alone, females are more likely than males to have the types of insurance ranked at the top of the insurance hierarchy and less likely than their counterparts to have the types ranked lower. Disaggregating the data changes the picture somewhat. We see that the proportion of females with private insurance falls by a couple of percentage points while the proportion of females who depend on Medicare grows by three percentage points in the late stage of retirement. By the middle late stage of retirement, females are more likely to be reliant on Medicare than their male counterparts. Males over the age of 85 are much more likely to report other types of insurance than females.

Although the ability to afford health care has been a long-time worry for some Americans, food and home security are also becoming an important area of concern. These issues are addressed in Table 7. First, we see that a majority of seniors own[40] their homes. Slightly more females than males do so, and those in the middle stage of retirement are more likely to own their homes than seniors living in the early and late stages. Rent subsidies give us a better picture of what is happening at the bottom end of the income distribution. Approximately 13% of senior females report receiving rent subsidies in the early stage of retirement, and that falls to 10% in the late stage. The trend for senior males is the opposite: 8% in the early stage growing to 10% in the late stage. Not surprisingly, the proportion of those reporting receipt of SNAP is closely aligned with those reporting rent subsidies. The proportion of females reporting use of SNAP is double the proportion of males in the later two stages of retirement. Slightly more females than males also report being food insecure[41] across the stages (however, the numbers and differences are small). A note here is that by the time seniors are into their late 80s and older, their food consumption is often minimal, and although they may deem the diet satisfactory, nutritionists would not.[42] The last row of Table 7 presents the proportion of seniors living alone who state they either limit or skip taking their

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[40] Ownership includes owned or being bought (having a mortgage).
[41] Food security questions are standard in many health and well-being surveys. In the NHIS, the food security status was determined by responses to 10 food security questions that included information about the ability to buy nutritious food, the need to cut food portions, or going without food. The questions are used to provide an index of food secure, low food security and very low food security. Those whose responses put them into the low or very low food security categories are considered food insecure here.
[42] See, for example, H. H. Keller, Nutrition and Health-Related Quality of Life in Frail Older Adults, *Journal of Nutrition, Health & Aging* 8, no. 4: 245–252 (2004).

medications because they cannot afford them. We see that, again, this tracks with the proportion of individuals using rent or food subsidies. Females are more likely not to be able to afford their medications, but the difference is largest in the early stage and falls to the late stage where about 4% of males and females are unable to afford their medications.[43] The similarity in the proportions of seniors reporting rent subsidies, SNAP participation, food insecurity and issues paying for medications indicates that these measures say something about poverty or, perhaps, extreme poverty.[44] Although it is difficult to make generalizable statements because of the small sample sizes in some of the subcategories, senior females appear to be worse off than senior males in the measures reported here that may be considered as nonincome indications of poverty. By the late stage of retirement, the statistics are similar (except for SNAP receipt), and this may be a result of the population of males and females that live past the age of 85 having similar characteristics that enable longevity.

The last table of nonincome data describes the health status of seniors by stage and sex. Table 8 indicates that senior males are more likely to report "physical health issues" whereas females are more likely to report mental health issues. In addition, differences and similarities seen in the earlier stages of retirement often change by the late stage. In the early and middle stages, senior males are more likely than senior females to report being in poor or very poor health, by about five percentage points. By the late stage, males and females are equally likely to report being in poor or very poor health. About 30% of senior males report being poor or very poor health consistently across the stages. However, the percentage of females self-reporting the worst health states grows by a third from early to late stage. Substantially more males report being overweight; almost half of senior males in the late stage of retirement report being overweight, but only a third of females do. On the other hand, more females than males report being obese in the first two stages of retirement. Overall, about a fifth of seniors report having diabetes, but only one in 10 females in the late stage of retirement do so, compared to a quarter of males (however, the severity of the disease is unknown). Overall, similar proportions of males and females report having disabilities across the stages of retirement (more males report disabilities in the middle stage). Finally, senior females living alone are more likely than their male counterparts to report mental health issues. Once again, the five-percentage-point difference in reports of anxiety and depression across the sexes masks differences across the stages of retirement. Females are much more likely than males to report these issues in early retirement, but the reporting is much more similar by males and females living alone in the late stage of retirement.

The remainder of the paper explores the economic (as measured by income) situation of seniors living alone in retirement by sex and stage. We begin by calculating the poverty rates for seniors living alone. The poverty threshold, an absolute poverty line, for those living alone aged 65 years and older is $12,261 per year (see Table A1). Table 9 displays the poverty rates for seniors living in poverty by sex and stage. Consistent with the literature, poverty rates are higher for seniors than on average,[45] and female seniors are worse off than senior males (16.6% of senior females live in poverty vs. 13.9% of senior males). Senior

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[43] See, for example, S. G. Morgan and A. Lee A, Cost-Related Non-Adherence to Prescribed Medicines among Older Adults: A Cross-sectional Analysis of a Survey in 11 Developed Countries, *BMJ Open* 7:e014287 (2017), where 16.8% of adults over the age of 55 identified cost-related nonadherence to medication regimes, the highest prevalence of the 11 countries. Canada had the second highest national prevalence at 8.3%.

[44] Although outside the scope of this paper and the ability of the NHIS data's observational limits, these measures could be explored in a multidimensional exploration of poverty for seniors; see, for example, Brian Glassman, U.S. Census Bureau Report, Multidimensional Deprivation in the United States: 2017 American Community Survey Report, https://www.census.gov/content/dam/Census/library/publications/2019/demo/acs-40.pdf (2019).

[45] The Census Bureau reported the official poverty rate as 10.4% in 2019. In 2019 33.9 million people were in poverty in the U.S.; see, for example, Income, Poverty and Health Insurance Coverage in the U.S.: 2020 (census.gov)

females experience higher rates of poverty than males across the stages of retirement. Although poverty rates fall across the stages of retirement, rates fall more substantially for males (by 4.3 percentage points) than females (by 1.9 percentage points). By the late stage of retirement, 15.2% of senior females live in poverty compared to 10.7% for males.

Tables 10 and 11 explore sources of income available to seniors in the U.S.[46] Respondents can be in receipt of multiple types of income, thus the columns do not add up to 100%. There is no information on the proportion of an individual's income each source covers, just whether the respondent reported the source. When examining the population of seniors living alone, the proportions reporting different types of incomes are not that different. Senior males are a little more likely than senior females to have income coming from wages, SSI/SSD and other, and slightly less likely to have sources of income including investment, private pensions and Social Security. The differences are more striking when examining sources by poverty status. Slightly more males with incomes above the poverty line report receipt of Social Security than males living in poverty. It is surprising that for those living in both poor and nonpoor situations, a higher proportion of females report private pensions and investment income than their male counterparts (recall that there is no record of amount received from the income sources). Substantially more males in nonpoor circumstances are in receipt of SSI/SSD and other income sources than their female counterparts, but the proportions are small.

Table 11 extends the analyses to examine sources of income across the stages of retirement. Surprisingly, 9% of males and 4% of females over the age of 85 report some income from wages (only nonpoor seniors in the late stage reported wages). If aggregating seniors in living alone in the late-stage retirement, it seems that almost all seniors report Social Security payments (~95%). However, disaggregation shows that seniors living in poverty are less likely to be in receipt of Social Security than those who are wealthier (nonpoor).

The final two tables provide the results of our income analyses. Recall that the U.S. uses pretax income for poverty statistics (thus, we do so in this study). Table 12 provides an overview of the income distribution[47] of seniors living alone by sex, stage and poverty status. The U.S. Census Bureau reports the 2019 median income of all households to be $68,703, and for all senior households it was $47,357.[48]

The first four columns of data present median income of seniors living alone. Three facts are immediately evident. First, female seniors' median incomes are never higher than males' in any of the subcategories. Second, the medians for those living above the poverty line are consistently close to three times that of those that live with incomes under the poverty line. Third, the median income for those living in poverty is markedly below the poverty threshold. Income falls across the stages for the nonpoor, and the divide between male and female income grows. Alone seniors in the late stage of retirement have the lowest median incomes, and females' are lower than males' by about 4%. Mean incomes provide a similar picture for the nonpoor. Of note, the mean incomes of the groups living in poverty are considerably below their median, indicating a distribution skewed toward the lower income end of the distribution, and the

[46] The NHIS asks respondents multiple questions about the types of income the members of their family received and amalgamates them as wage, investments, private pensions, Social Security (SS, OASDI or Railroad Pension Program), Social Security Disability Insurance (SSDI, pays benefits to insured individuals, i.e., those who paid into Social Security taxes through work), Supplemental Security Income (SSI, pays benefits to those who have limited income or wealth), welfare (respondents who claimed public assistance or welfare payments from the state or local welfare office) or other.

[47] The public use NHIS caps incomes at $220,000; 0.70% of the weighted sample report incomes of $220,000 or more. The top coding does not affect median income or the mean income of the poor because both are far below $220,000, but it does affect the mean of the nonpoor population, which would likely be substantially higher without the cap.

[48] See Income and Poverty in the United States: 2019 (census.gov)

difference is more marked for females than males except for the late stage of retirement. Finally, the last two columns of data in Table 12 display the mean poverty gap by sex and stage for those living in poverty. Although the poverty gap is sizeable for all groups, for those over the age of 85 (late stage of retirement), the poverty gap is approximately $3,500 for both males and females or 30% below the poverty line. Taken together, the information in Table 12 indicates that seniors living alone in the U.S. are living, on average, on incomes well below the poverty threshold (an absolute measure of poverty).

Table 13 examines the economic situation of seniors if a supplemental benefit were paid to those living in poverty. As described earlier, two supplemental benefits are proposed. Supplement 1 is equal to $3,709, the largest poverty gap, and Supplement 2 is equal to $3,475, the amount equal to the gap of females living alone in the late stage of poverty.[49] We focus on females because they make up the vast majority of seniors in general and particularly in the alone stage. The first four rows of data present the proportion of the study population that remain in poverty after the supplements. Both supplements move the poverty rate down by about 10 percentage points (compare to table 9). The reduced poverty rates still leave a higher proportion of females in poverty than males. The mean poverty gaps actually grow. This is an indication that those at the bottom end of the income distribution are living with incomes that are far below the poverty threshold. The supplements lift those closest to the threshold out of poverty, leaving those that were far below the poverty line in poverty and increasing the mean gap.

Summary and Discussion

The purpose of our study was to examine the life circumstances of seniors who live alone in retirement. This group is vastly dominated by females. We were particularly interested in females living what we call the "Alone Stage of Retirement" (ASR). By the time seniors are 85 years old and older, almost two-thirds are females in the U.S. For those living alone, almost three-quarters are females. As is pointed out in the literature, senior females have experienced different marital states than senior males, with a higher proportion of females being divorced or widowed than males. By the late stage of retirement just over 80% of single females are widowed and 76% of single males. According to the NHIS insurance hierarchy, senior females living alone have better sources of health insurance than senior males. However, by the ASR, a higher proportion of females (by about 5 percentage points) depend on some form of Medicare than do males.

The nonincome measures of well-being support the considerable literature that indicates females are worse off in retirement than males, particularly in the later stages. Females are more likely to be in receipt of SNAP, be food insecure or not be able to afford prescriptions than males. Smaller proportions of females living alone in retirement report physical health issues (being overweight, diabetes), but higher proportions report mental health conditions (anxiety, depression).

When we examine income as a measure of well-being, it is clear that females in our study population are worse off than males; a higher proportion of lone females live in poverty than do their male counterparts (17% vs. 14%). Although the poverty rate for females living alone falls by about 2 percentage points across the stages of retirement (from 17% to 15%) for females, it falls more for males (15% to 11%). The proportion of females living in poverty by the ASR is almost 4 percentage points higher or 50% more than the proportion of males (15% vs. 11%).

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[49] The methodology used in Curtis and Andrews, *Challenges Faced by Canadian Women in the Alone Stage of Retirement* (n. 3 above).

Females depend on Social Security payments more than males do in all stages of retirement. A higher proportion of males are in receipt of wages in retirement years; surprisingly almost 10% of males and 5% of females with incomes above the poverty line still report wage income at ages of 85 years and older. At first look, the higher proportion of females in receipt of pensions and investments may seem to contradict the literature, which indicates females are much worse off in retirement than males when it comes to private pensions and investment income. However, the literature does point out that many females depend on their former male partners' incomes from pensions, and the data herein report the receipt of such income, not the amount.

When examining the income distribution more closely, seniors who live alone and live in poverty in the U.S. are living with very low incomes. Consistent with the broader literature those in the ASR report the lowest median incomes, and females report lower incomes than males (by about 4%). The mean incomes of those living in poverty are below their median, indicating a distribution is skewed toward the lower end of the income distribution, and the difference is more marked for females than males, except in the late stage of retirement. Although the poverty gap is sizeable for all groups, for those aged 85 and older (ASR), the poverty gap is approximately $3,500 for both males and females or 30% below the poverty line. Seniors living alone in the U.S. are living, on average, on incomes well below the poverty threshold (an absolute measure of poverty meant to be an indication of needed resources for age and family size).

Finally, an annual supplemental benefit that equates to the mean gap for the worst-off group (females living alone in the early stage of retirement, $3,709) or the mean gap for females in ASR ($3,491) is suggested. The supplemental payments are well within the realm of benefits offered in many of the basic or minimum income pilots and experiments occurring in the U.S.[50] The supplemental benefits reduce poverty by about 10 percentage points. The poverty gap widens for those who remain in poverty, but this is a result of the skewed income distribution with some seniors living very far below the poverty line.

Suggestions of more support for any group in the population are often met with questions regarding the negative labor market incentives incurring as a result of such benefits. In general, a very small proportion of seniors who live alone provide labor, and, thus, the impact should be extremely small. A broader discussion may be warranted around the fact that seniors past the age of 85 are still working (is it out of desire or necessity?). The costs of such initiatives are also important considerations. If the supplements suggested here were available only to seniors who live alone in poverty (approximately 2.4 million), the costs for the supplements would be between $8.1 billion and $8.8 billion. Given the U.S. GDP is approximately $23 trillion,[51] the cost of the supplement seems acceptable. Studies regarding basic or minimum income schemes often suggest the need for the multitude of programs offered at local, state and federal levels (e.g., housing subsidies, SNAP and health care) would diminish with a basic income, and thus the net costs of it would be less than projected. Others suggest that a minimal tax on the wealthy or the very wealthy would easily offset the additional costs. Finally, providing an income that is close to what the U.S. determines as the threshold of poverty for seniors who live alone ($12,261 in 2019) should provide for better health as they move through the stages of retirement, reducing needed health-care resources.

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[50] See For More Than 20 Guaranteed Income Projects, the Data Is In - Bloomberg
[51] www.bea.gov/news/2022/gross-domestic-product-fourth-quarter-and-year-2021-second-estimate

Table 1

SENIORS LIVING IN SINGLE-FAMILY HOUSEHOLDS IN THE U.S., 2019 NHIS

Age	Female: Number, [% of ages], (% of sexes)	Male: Number, [% of ages], (% of sexes)	Total [%]
65–69	8,997,146 [31.5] (53.7)	7,754,317 [33.3] (46.3)	16,751,463 [32.3]
70–74	7,468,643 [26.1] (53.9)	6,378,959 [27.4] (46.0)	13,847,602 [26.7]
75–79	5,052,636 [17.7] (54.6)	4,202,726 [18.1] (45.4)	9,255,362 [17.8]
80–84	3,459,281 [12.1] (57.2)	2,584,298 [11.1] (42.8)	6,043,579 [11.7]
≥85	3,616,103 [12.6] (61.0)	2,361,180 [10.1] (39.5)	5,977,283 [11.5]
Total	28,593,809 [100] (55.1)	23,281,480 [100] (44.9)	51,875,289

Source: Authors' calculations using 2019 National Health Institutes Survey, https://www.cdc.gov/nchs/nhis/2019nhis.htm.

Note: The NHIS excludes institutionalized populations. Study excludes families living in multiple-family households.

Table 2
FAMILY SIZE FOR SENIORS U.S. POPULATION, 2019 NHIS

Family Size	Female: Number, [% of ages], (% of sexes)	Male: Number, [% of ages], (% of sexes)	Total [%]
1	10,018,509 [35.0] (65.8)	5,209,689 [49.2] (34.2)	15,228,198 [29.4]
2	13,737,279 [48.0] (50.7)	14,107,73 [13.3] (49.3)	27,845,017 [53.7]
3	3,478,871 [12.2] (53.3)	3,047,225 [28.8] (46.7)	6,526,096 [12.6]
4	699,410 [2.4] (64.3)	387,994 [3.7] (35.7)	1,087,404 [2.1]
5	347,631 [1.2] (56.3)	270,290 [2.6] (43.7)	617,921 [1.2]
6+	283,861 [1.0] (60.3)	187,030 [1.8] (39.7)	470,891 [0.9]
Missing	28,248 [0.1] (28.3)	71,514 [0.7] (71.7)	99,762 [0.002]
Total	28,593,809 [100] (55.1)	23,281,480 [100] (44.9)	51,875,289

Source: Authors' calculations using 2019 National Health Institutes Survey, https://www.cdc.gov/nchs/nhis/2019nhis.htm.

Note: The NHIS excludes institutionalized populations. Study excludes families living in multiple-family households.

Table 3
MARITAL STATUS OF SENIORS, 2019 NHIS

Age	Female: Number, [% of ages], (% of sexes)	Male: Number, [% of ages], (% of sexes)	Total [%]
Married (includes common-law)	13,550,696 [47.4] (45.0)	16,529,777 [71.0] (55.0)	30,080,473 [58.0]
Divorced (includes separate)	4,084,783 [14.3] (62.7)	2,429,06 [10.4] (37.3)	6,513,849 [12.6]
Widowed	8,890,432 [31.1] (77.9)	2,523,941 [10.8] (22.1)	11,414,373 [22.0]
Never married	1,189,463 [4.2] (54.6)	990,747 [4.3] (45.4)	2,180,210 [4.2]
Not reported	878,435 [3.1] (52.0)	807,949 [3.5] (47.9)	1,686,384 [3.3]
Total	28,593,809 [100] (55.1)	23,281,480 [100] (44.9)	51,875,289

Source: Authors' calculations using 2019 National Health Institutes Survey, https://www.cdc.gov/nchs/nhis/2019nhis.htm.

Note: The NHIS excludes institutionalized populations. Study excludes families living in multiple-family households.

Table 4

POPULATION OF SENIORS LIVING ALONE BY STAGE, 2019 NHIS

Age	Female: Number, [% of ages], (% of sexes)	Male: Number, [% of ages], (% of sexes)	Total (%)
Early	4,726,430 [47] (62)	2,864,374 [55] (38)	7,590,804 [50] (100)
Middle	3,365,809 [34] (67)	1,530,866 [29] (33)	4,896,675 [32] (100)
Late	1,926,270 [19] (72)	814,449 [16] (28)	2,740,719 [18] (100)
Total	10,018,509 [100] (66)	5,209,689 [100] (34)	15,228,198 [100] (100)

Source: Authors' calculations using 2019 National Health Institutes Survey, https://www.cdc.gov/nchs/nhis/2019nhis.htm.

Note: The NHIS excludes institutionalized populations. Study excludes families living in multiple-family households.

Table 5
MARITIAL STATUS OF SENIORS LIVING ALONE BY STAGE, 2019 NHIS

Status	Female : Number, [% of ages], (% of sexes)	Male: Number, [% of ages], (% of sexes)	Total (%)
Early Stage			
Marrieda	193,434 [4.1] (52.5)	175,333 [6.1] (47.5)	368,767 [4.9] (100)
Divorced	1,919,320 [40.6] (57.7)	1,405,185 [49.1] (42.3)	3,324,505 [43.8] (100)
Widowed	1,938,720 [41.0] (77.5)	563,611 [19.7] (22.5)	2,502,331 [33.0] (100)
Never married	537,134 [11.3] (46.9)	607,923 [21.2] (53.1)	1,145,057 [15.1] (100)
Not reported	137,822 [2.9] (55.1)	112,322 [3.9] (44.9)	250,144 [3.3] (100)
Middle Stage			
Marrieda	101,697 [3.0] (48.0)	110,084 [7.2] (52.0)	211,781 [4.3] (100)
Divorced	727,688 [21.6] (60.3)	479,776 [31.3] (39.7)	1,207,464 [24.7] (100)
Widowed	2,251,107 [66.9] (75.8)	720,310 [47.1] (24.2)	2,971,417 [60.7] (100)
Never married	190,726 [5.7] (54.6)	158,701 [10.4] (45.4)	349,427 [7.1] (100)
Not reported	94,591 [2.8] (60.4)	61,995 [4.1] (39.6)	156,586 [3.2] (100)
Late Stage			
Marrieda	47,695 [2.5] (50.5)	46,792 [5.8] (49.5)	94,487 [3.5] (100)
Divorced	151,064 [7.8] (68.4)	69,797 [8.6] (31.6)	220,861 [8.1] (100)
Widowed	1,567,742 [81.4] (71.7)	617,993 [75.9] (28.3)	2,185,735 [79.8] (100)
Never married	78,198 [4.1] (62.3)	47,315 [5.8] (37.7)	125,513 [4.6] (100)
Not reported	81,571 [4.2] (71.5)	32,552 [4.0] (28.5)	114,123 [4.2] (100)

Source: Authors' calculations using 2019 National Health Institutes Survey, https://www.cdc.gov/nchs/nhis/2019nhis.htm.

Note: The NHIS excludes institutionalized populations.

aSpouse does not live in same residence.

Table 6
PERCENTAGE OF SENIORS LIVING ALONE COVERED BY INSURANCE TYPE, 2019 NHIS

Type	All		Stage 1		Stage 2		Stage 3	
	Female	Male	Female	Male	Female	Male	Female	Male
Private insurance	39.18%	33.71%	39.63%	31.64%	39.59%	38.28%	37.38%	32.37%
Dual insurance (private insurance coupled with a public insurance)	10.40	9.11	10.72	10.06	10.17	7.39	10.01	9.04
Medicare Advantage	31.32	24.52	32.31	23.94	30.48	25.58	30.36	24.57
Medicare	14.89	15.29	13.23	17.22	15.54	13.03	17.84	12.76
Other	3.65	16.59	3.16	15.83	3.89	15.55	4.42	21.25
None	0.56	0.77	0.95	1.31	0.33	0.17	0.00	0.00

Source: Authors' calculations using 2019 National Health Institutes Survey, https://www.cdc.gov/nchs/nhis/2019nhis.htm.

Note: The NHIS excludes institutionalized populations.

Table 7
PERCENTAGE OF SENIORS LVING ALONE WITH NONINCOME INDICATIONS OF WEALTH OR POVERTY, 2019 NHIS

Type	All		Stage 1		Stage 2		Stage 3	
	Female	Male	Female	Male	Female	Male	Female	Male
Own home	67.5%	66.5%	65.3%	64.6%	71.6%	72.2%	65.8%	62.4%
Rent subsidy	11.6	8.1	12.7	8.0	11.0	7.3	10.0	10.1
SNAP[a]	10.9	7.7	12.6	10.1	9.8	4.9	8.4	4.2
Food insecure	6.2	5.7	7.7	7.9	5.6	3.2	3.3	2.73
Cannot afford prescptions	8.12	4.8	11.6	5.1	5.8	5.0	3.9	3.5

Source: Authors' calculations using 2019 National Health Institutes Survey, https://www.cdc.gov/nchs/nhis/2019nhis.htm.

[a]SNAP = Supplemental Nutritional Assistance Program.

Table 8

PERCENTAGE OF SENIORS LVING ALONE WITH NONINCOME INDICATORS OF WELL-BEING, 2019 NHIS

Type	All		Stage 1		Stage 2		Stage 3	
	Female	Male	Female	Male	Female	Male	Female	Male
Poor health[a]	23.9%	28.2%	21.4%	26.4%	24.5%	30.1%	29.0%	30.9%
Overweight	32.3	40.6	30.7	37.6	36.7	42.9	28.6	46.0
Obese	31.6	26.3	40.0	31.7	28.9	22.3	15.7	14.3
Diabetes	18.7	21.2	20.6	20.7	20.7	20.6	10.3	24.4
Anxiety	16.7	11.1	19.3	13.0	15.0	8.1	10.0	13.4
Depression	21. 0	16.2	26.1	18.7	17.9	12.8	13.9	13.76
Disability	76.6	79.5	83.5	83.9	76.9	80.9	59.2	61.6

Source: Authors' calculations using 2019 National Health Institutes Survey, https://www.cdc.gov/nchs/nhis/2019nhis.htm.

[a]Self-reported health status.

Table 9

PROPORTION OF SENIORS LIVING ALONE IN POVERTY BY STAGE, 2019 NHIS

Stage	All Mean (S.D.)	Female Mean (S.D.)	Male Mean (S.D.)
All	15.6 (36.3)	16.6 (37.2)	13.9 (34.6)
Early	16.7 (37.3)	17.1 (37.7)	15.0 (35.7)
Middle	15.8 (36.5)	16.6 (37.2)	13.5 (34.3)
Late	14.1 (34.8)	152 (35.9)	10.7 (30.9)
Trend	Decreases	Decreases	Decreases

Source: Authors' calculations using 2019 National Health Institutes Survey, https://www.cdc.gov/nchs/nhis/2019nhis.htm.

Note: The NHIS excludes institutionalized populations.

Table 10
INCOME SOURCES FOR SENIORS LIVING ALONE BY POVERTY STATUS, 2019 NHIS

Source	All		Female		Male	
All	Mean	(S.D.)	Mean	(S.D.)	Mean	(S.D.)
Wages	0.230	(0.421)	0.214	(0.410)	0.261	(0.439)
Investments	0.351	(0.477)	0.359	(0.480)	0.337	(0.473)
Pension	0.456	(0.498)	0.462	(0.499)	0.444	(0.497)
SS	0.881	(0.324)	0.890	(0.313)	0.864	(0.343)
SSI/SSD	0.083	(0.276)	0.081	(0.273)	0.086	(0.280)
Welfare	0.026	(0.158)	0.025	(0.156)	0.027	(0.163)
Other	0.060	(0.237)	0.040	(0.196)	0.099	(0.298)
	All		Female		Male	
Nonpoor	Mean	(S.D.)	Mean	(S.D.)	Mean	(S.D.)
Wages	0.259	(0.438)	0.246	(0.431)	0.283	(0.451)
Investments	0.407	(0.491)	0.419	(0.494)	0.384	(0.487)
Pension	0.512	(0.500)	0.520	(0.500)	0.496	(0.500)
SS	0.890	(0.313)	0.901	(0.298)	0.869	(0.338)
SSI/SSD	0.043	(0.203)	0.038	(0.190)	0.053	(0.223)
Welfare	0.012	(0.110)	0.011	(0.104)	0.014	(0.119)
Other	0.065	(0.246)	0.044	(0.205)	0.103	(0.304)
	All		Female		Male	
Poor	Mean	(S.D.)	Mean	(S.D.)	Mean	(S.D.)
Wages	0.074	(0.261)	0.055	(0.228)	0.118	(0.323)
Investments	0.057	(0.231)	0.060	(0.238)	0.048	(0.215)
Pension	0.157	(0.364)	0.173	(0.379)	0.118	(0.323
SS	0.832	(0.374)	0.932	(0.374)	0.833	(0.374)
SSI/SSD	0.298	(0.458)	0.300	(0.459)	0.195	(0.457)
Welfare	0.099	(0.299)	0.095	(0.293)	0.111	(0.314)
Other	0.035	(0.183)	0.020	(0.141)	0.068	(0.253)

Source: Authors' calculations using 2019 National Health Institutes Survey, https://www.cdc.gov/nchs/nhis/2019nhis.htm.

Notes: The NHIS excludes institutionalized populations. Approximately 5% of respondents did not report source of income (similar for poor and nonpoor respondents).

Table 11
INCOME SOURCES FOR SENIORS LIVING ALONE BY STAGE AND POVERTY STATUS, 2019 NHIS

Source	Early				Middle				Late			
	Female		Male		Female		Male		Female		Male	
All	Mean	(S.D.)	Mean	(S.D.)	Mean	(S.D.)	Mean	(S.D.)	Mean	(S.D.)	Mean	(S.D.)
Wages	0.351	(0.477)	0.349	(0.477)	0.122	(0.328)	0.189	(0.392)	0.035	(0.185)	0.085	(0.280)
Investments	0.326	(0.469)	0.305	(0.461)	0.387	(0.487)	0.393	(0.489)	0.389	(0.488)	0.345	(0.477)
Pension	0.422	(0.494)	0.382	(0.486)	0.496	(0.500)	0.514	(0.500)	0.504	(0.500)	0.529	(0.500)
SS	0.835	(0.371)	0.803	(0.397)	0.934	(0.248)	0.941	(0.236)	0.947	(0.224)	0.943	(0.232)
SSI/SSD	0.100	(0.300)	0.112	(0.315)	0.068	(0.252)	0.038	(0.192)	0.059	(0.236)	0.083	(0.277)
Welfare	0.026	(0.159)	0.028	(0.166)	0.026	(0.159)	0.027	(0.163)	0.020	(0.142)	0.025	(0.156)
Other	0.041	(0.200)	0.119	(0.324)	0.038	(0.190)	0.044	(0.205)	0.041	(0.198)	0.128	(0.335)
	Female		Male		Female		Male		Female		Male	
Nonpoor	Mean	(S.D.)	Mean	(S.D.)	Mean	(S.D.)	All	Mean	(S.D.)	Mean	(S.D.)	Mean
Wages	0.407	(0.491)	0.379	(0.485)	0.138	(0.346)	0.211	(0.409)	0.042	(0.200)	0.095	(0.294)
Investments	0.385	(0.487)	0.348	(0.476)	0.456	(0.498)	0.448	(0.498)	0.439	(0.497)	0.389	(0.489)
Pension	0.473	(0.500)	0.429	(0.495)	0.566	(0.496)	0.574	(0.495)	0.553	(0.498)	0.579	(0.495)
SS	0.846	(0.361)	0.803	(0.397)	0.942	(0.234)	0.943	(0.232)	0.965	(0.184)	0.950	(0.218)
SSI/SSD	0.045	(0.206)	0.075	(0.264)	0.030	(0.171)	0.025	(0.156)	0.035	(0.184)	0.027	(0.162)
Welfare	0.012	(0.110)	0.016	(0.126)	0.012	(0.109)	0.012	(0.108)	0.006	(0.077)	0.014	(0.116)
Other	0.045	(0.206)	0.127	(0.333)	0.043	(0.203)	0.050	(0.219)	0.044	(0.206)	0.119	(0.325)
	Female		Male		Female		Male		Female		Male	
Poor	Mean	(S.D.)	Mean	(S.D.)	Mean	(S.D.)	All	Mean	(S.D.)	Mean	(S.D.)	Mean
Wages	0.085	(0.279)	0.176	(0.382)	0.039	(0.195)	0.041	(0.201)	0.000	(0.000)	0.000	(0.000)
Investments	0.049	(0.216)	0.066	(0.250)	0.048	(0.215)	0.032	(0.178)	0.115	(0.321)	0.000	(0.000)

Pension	0.176	(0.382)	0.116	(0.322)	0.143	(0.351)	0.110	(0.317)	0.227	(0.422)	0.140	(0.355)
SS	0.783	(0.413)	0.779	(0.417)	0.897	(0.305)	0.926	(0.265)	0.864	(0.364)	0.886	(0.326)
SSI/SSD	0.364	(0.482)	0.315	(0.467)	0.257	(0.439)	0.135	(0.346)	0.160	(0.369)	0.521	(0.511)
Welfare	0.090	(0.287)	0.097	(0.297)	0.095	(0.295)	0.138	(0.350)	0.105	(0.300)	0.115	(0.327)
Other	0.027	(0.161)	0.071	(0.254)	0.011	(0.105)	0.011	(0.000)	0.020	(0.142)	0.203	(0.412)

Source: Authors' calculations using 2019 National Health Institutes Survey, https://www.cdc.gov/nchs/nhis/2019nhis.htm.

Note: The NHIS excludes institutionalized populations. Approximately 5% of respondents did not report source of income (similar for poor and nonpoor respondents.)

Table 12

MEDIAN AND MEAN ANNUAL INCOME AND POVERTY GAP FOR SENIORS LIVING ALONE BY STAGE OF RETIREMENT

	Median Income				Mean Income				Poverty Gap	
ASR	Nonpoor		Poor		Nonpoor[a]		Poor		Poor	
	Female median	Male median	Female median	Male median	Female mean (S.D.)	Male mean (S.D.)	Female mean (S.D.)	Male mean (S.D.)	Female mean (S.D.) [% line]	Male mean (S.D.) [% line]
Early	35,000	36,000	9,600	10,000	45,616 (35,124)	47,378 (38,746)	8,552 (3,353)	9,353 (3,073)	3,709 (3353) [30%]	3,008 (3,074) [25%]
Middle	30,000	31,396	10,000	10,000	38,466 (30,554)	44,158 (35,264)	9,291 (2,916)	9,375 (3,325)	2,969 (2916) [24%]	2,885 (3,325) [24%]
Late	28,000	30,403	9,264	9,600	36,556 (27,537)	43,983 (34,388)	8,786 (2,988)	8,694 (3,395)	3,475 (2,988) [28%]	3,567 (3,395) [29%]
All[b]	10,000	10,000	30,000	34,000	41,444 (32,481)	45,877 (37,071)	8,842 (3,159)	9,221 (3,159)	3,419 (3,159) [28%]	3,040 (3174) [25%]

Note: The poverty gap measures the difference between the poverty line and household income for those with incomes below the poverty threshold ($12,261).

[a]Income is capped at $220,000 so the mean for the nonpoor is substantially underestimated for the population.

[b]All seniors: Median income = $28,00, Mean = $37,670 (33,793); All females: Median income = $26,000, Mean = $36,049 (32,076); All males: Median income = $30,000, Mean = 40,789 (36,680); All poor: Poverty gap = $3,304 (27% of poverty threshold/line).

Table 13

POVERTY RATE AND POVERTY GAP FOR SENIORS LIVING ALONE BY STAGE OF RETIREMENT AFTER SUPPLEMENT

| ASR | Poverty Rate | | | | Poverty Gap | | | |
| | Supp. 1[a] | | Supp. 2[a] | | Supp. 1[a] | | Supp. 2[a] | |
	Female mean (S.D.)	Male mean (S.D.)	Female mean (S.D.)	Male mean (S.D.)	Female mean (S.D.) [% line]	Male mean (S.D.) [% line]	Female mean (S.D.) [% line]	Male mean (S.D.) [% line]
Early	0.060 (0.238)	0.038 (0.188)	0.063 (0.243)	0.040 (0.194)	3,599 (3,126) [29%]	3,652 (3,033) [30%]	3,679 (3,150) [30%]	3,660 (3,076) [30%]
Middle	0.040 (0.196)	0.033 (0.179)	0.039 (0.196)	0.033 (0.179)	3,575 (2,735) [29%]	3,964 (3,198) [32%]	3,809 (2,735) [31%]	4,198 (3,198) [34%]
Late	0.055 (0.228)	0.031 (0.173)	0.055 (0.228)	0.031 (0.173)	2,861 (2,727) [23%]	4,269 (3,181) [35%]	3,095 (2,727) [25%]	4,503 (3,181) [37%]
All	0.052 (0.222)	0.035 (0.183)	0.054 (0.225)	0.036 (0.186)	3,444 (2,947) [28%]	3,825 (3,043) [32%]	3,596 (2,962) [29%]	3,918 (3,077) [32%]

Note: The poverty gap measures the difference between the poverty line and household income for those with incomes below the poverty threshold ($12,261).

[a]Supp. 1 = Supplemental Payment 1 = $3,709; Supp. 2 = Supplemental Payment 2 = $3,419.

Appendix: Supplemental Tables

Table A1

POVERTY THRESHOLDS FOR 2019 BY SIZE OF FAMILY AND NUMBER OF RELATED CHILDREN UNDER 18
YEARS.

Size of Family Unit	Weighted Average Thresholds	Related Children under 18 Years								
		None	One	Two	Three	Four	Five	Six	Seven	Eight or More
One person (unrelated individual)	13,011									
Under age 65	13,300	13,300								
Aged 65 or older	12,261	12,261								
Two people	16,521									
Householder under age 65	17,196	17,120	17,622							
Householder aged 65 or older	15,468	15,453	17,555							
Three people	20,335	19,998	20,578	20,598						
Four people	26,172	26,370	26,801	25,926	26,017					
Five people	31,021	31,800	32,263	31,275	30,510	30,044				
Six people	35,129	36,576	36,721	35,965	35,239	34,161	33,522			
Seven people	40,016	42,085	42,348	41,442	40,811	39,635	38,262	36,757		
Eight people	44,461	47,069	47,485	46,630	45,881	44,818	43,470	42,066	41,709	

| Nine people or more | 52,875 | 56,621 | 56,895 | 56,139 | 55,503 | 54,460 | 53,025 | 51,727 | 51,406 | 49,426 |

Table A2

POVERTY GUIDELINES FOR 2019 BY FAMILY SIZE

Family Size	1	2	3	4	5	6	7	8
Guideline for 48 contiguous states	12,490	16,910	21,330	25,750	30,170	34,590	39,010	43,430
Guideline for Alaska	15,600	21,130	26,660	32,190	37,720	43,250	48,780	54,310
Guideline for Hawaii	14,380	19,460	24,540	29,620	34,700	39,780	44,860	49,940

Source: U.S. Department of Health and Human Services, https://aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines/prior-hhs-poverty-guidelines-federal-register-references/2021-poverty-guidelines#guidelines.

Table A3

STUDY SAMPLE SIZE SENIORS, 2019 NHIS

Age	Female (%)	Male (%)	Total
65–69	1,584 (54.5)	1,272 (44.5)	2,856
70–74	1,356 (56.4)	1,050 (43.6)	2,406
75–79	935 (57.4)	694 (42.6)	1,629
80–84	687 (61.2)	436 (38.8)	1,123
≥85	756 (63.3)	439 (36.7)	1,195
Total	5,318 (57.8)	3,891 (42.3)	9,209

Source: Authors' calculations using 2019 National Health Institutes Survey, https://www.cdc.gov/nchs/nhis/2019nhis.htm.

Note: The NHIS excludes institutionalized populations.

Table A4

STUDY SAMPLE SIZE SENIORS LIVING ALONE, 2019 NHIS

Age	Female (%)	Male (%)	Total
65–69	682 (59.6)	463 (40.4)	1,145
70–74	684 (66.1)	351 (33.9)	1,035
75–79	519 (32.5)	250 (67.5)	769
80–84	435 (72.4)	166 (27.6)	601
≥85	561 (29.6)	236 (70.4)	797
Total	2,881 (33.8)	1,466 (66.3)	4,347

Source: Authors' calculations using 2019 National Health Institutes Survey, https://www.cdc.gov/nchs/nhis/2019nhis.htm.

Note: The NHIS excludes institutionalized populations.

Acknowledgments

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Society of Actuaries Research Institute

475 N. Martingale Road, Suite 600

Schaumburg, Illinois 60173

www.SOA.org