Cumulative Effects of Family Formation on Late-Life Income of Women

Gretchen Livingston and Paula England

PARC Working Paper Series

WPS 02-06

CUMULATIVE EFFECTS OF FAMILY FORMATION ON LATE-LIFE INCOME OF WOMEN

Gretchen Livingston
glivings@pop.upenn.edu
Paula England
pengland@pop.upenn.edu

Population Studies Center
University of Pennsylvania
3718 Locust Walk
Philadelphia, Pennsylvania 19104

CUMULATIVE EFFECTS OF FAMILY FORMATION ON LATE-LIFE INCOME OF WOMEN

ABSTRACT

How does rearing children affect women's retirement income? Does engaging in care giving of other kin have an effect? While a full literature establishing the negative effects of children on women's lifetime *earnings* exists, little research has examined these effects on *retirement income*, and fewer still have been able to conduct race-specific analyses. To the extent that children affect women's employment histories, we would expect an effect on retirement income, since it is a function of Social Security and pensions, which are based on one's own earnings. Using data from the Health and Retirement Survey (HRS), with linked information from respondent's social security files, we combine the two major sources of retirement income for most households--Social Security benefits and pension benefits--to estimate late-life household income. We regress this projected pension- and Social Security-based household retirement income on marital status, children, mid-life caregiving, and work history, running separate models for White and African American women.

We find a "child penalty" in retirement, analogous to the penalty to earnings during the employment years. That is, women who have had (more) children have lower retirement income. We also find a reduction in retirement income for those who have spent substantial time caring for grandchildren or parents. Much of this "child penalty" is explained by having fewer years of employment, and lower lifetime earnings. The effects of children and work history on retirement income are greater for women who are not currently married, because their retirement benefits are based solely upon their own employment history. Conversely, married women's retirement incomes, which are also a function of their spouses' work history, are less adversely affected by family formation.

The financial well-being of the elderly has become a germane topic of research in recent decades, as the U.S. population has aged. This is particularly true for elderly women who, given their relative longevity, comprise the majority of the elderly population. The good news is that the overall financial well-being of elderly women in the U.S. has improved markedly over the past 40 years. Poverty rates for White, African American, and Hispanic women have declined, and their income-to-needs ratios have increased. Even so, the fact remains that elderly women's well-being lags behind that of comparable elderly men, and that the aggregate measures of women's well-being mask a great deal of variation among elderly females.

Indeed, while overall measures of well-being have improved, intra-cohort inequality has actually increased (O'Rand and Henretta 2000, Danziger and Gottschalk 1993). This is particularly true of the aged. For instance, Levine et al. (2000a) find marked differences in African American, White, and Hispanic women's projected retirement wealth, depending on their race and marital status. The authors found that wealth among these women ranged from a high of $555,000 for married White women to a low of $72,000 for single Hispanic women.

Numerous factors may account for the diversity in financial security experienced by elderly women in the U.S. Evidence now seems to suggest that the relative economic disadvantage of women may actually increase in old age, due to their family formation experiences throughout the life course, and how these experiences impact their worklife, and their access to Social Security and pension benefits in old age.

Past research has confirmed the persistence of gender differences in late-life well-being (Levine et al. 2000a), and the role of gendered worklife experiences in explaining this gender gap. However,

there have been few recent attempts to consider within-woman differences in late-life income, and explore the role of family formation in explaining these differences. Due to data limitations, it has been especially difficult to be sensitive to racial/ethnic differences in the effects of family formation on late-life income, despite racial/ethnic differences in patterns of employment and family composition, and some evidence that late-life returns to life course events varies by race (Smith and Moen 1988).

In this paper, we build upon the past work by examining the cumulative effect of marital experiences, childrearing, and other caregiving on the late-life economic well-being of women. We consider how family formation may affect late-life income both directly and indirectly via its effect on women's employment characteristics.

SOURCES OF LATE-LIFE INCOME

The bulk of late-life income is comprised of three sources: Social Security benefits, private pensions, and income derived from assets. For Whites, these account for over 80% of late-life income and for Blacks they account for over 75% of late-life income. Other income sources include Supplemental Security Income (SSI) payments, which comprise less than 5% of the income of persons 65 or older and income from current employment, which may account for up to 10% of income among the elderly (Crystal 1995).

Social Security benefits are based upon an average wage measure, and generally are available to all persons 62 or older who worked for at least 10 years in a Social Security-covered job. Benefits are also available to married persons, and some previously married persons, with limited labor force experience or very low average wages based upon their *spouse's* labor market experience. (Particularly for earlier cohorts, it has typically been the wife who has the limited labor force attachment, while husbands typically spend the bulk of their adult life in the labor market.) (Levine et al. 2000b,

Schultz 1995, Kingson and Berkowitz 1993). Wives with limited or low-wage work histories can collect 50 percent of their husband's Social Security benefits, which is often higher than 100 percent of any benefits available to wives based upon their own employment history. Unlike some other countries, Social Security provides no reimbursement for work performed outside of the labor market, such as childrearing or adult caregiving (Burkhauser et al. 1994).

Unlike Social Security, pension funds are provided through employers and are not universally offered to labor force participants. However, like the government system, pensions are based primarily upon earnings, and are often contingent upon tenure within an organization. As such, they generally disadvantage persons with discontinuous employment, persons who enter the labor force at relatively older ages (e.g., after childbearing), and low-wage earners (Schultz 1995, O'Rand and Henretta 2000, pp. 26, 48; O'Rand and Landerman 1984). Though recent legislation has limited the ability of a pension holder to exclude his/her spouse from receiving survivor benefits, it is still quite common for women to lose the income from their husband's pension upon his death.

PATHWAYS FROM FAMILY FORMATION AND WORKLIFE
TO LATE-LIFE INCOME

<u>Marital History</u>

Social Security benefits are affected *directly* by a woman's marital status. Single, never married women receive Social Security benefits based solely upon their own labor market performance, while women who have been married (in most cases, for at least 10 years) may choose to derive their Social Security benefits from their own employment history, or that of their present/former spouses.

This distribution system favors married women, since benefits available based upon a woman's wage history are quite often less than those available based upon the husband's wage history. Current marital status is also important in determining benefits, since for most women, entry into widowhood is associated with a 33% decrease in Social Security benefits (Burkhauser et al. 1994, Weir and Willis 2000).

Marriage can affect women's **pension** benefits *directly*, as well. Though recent years have brought changes, in the past men were much more likely to have jobs that provided access to private pensions than their wives. As such, the probability of a woman having access to private pension benefits is affected directly by her marital status. And if the woman was not named as a beneficiary on the pension, her pension income ceased upon the death of her husband (Hurd and Wise 1989).

Since **pension** and **Social Security** benefits are based upon average earnings and labor force attachment, a woman's marital history can also affect her late-life income *indirectly* through the length and continuity of her employment, as well as the wages earned. Until the late 1960s, married White women typically remained outside of the workforce (Goldin 1990), and less labor force attachment can mean lower wages and shorter tenures within any one organization. This separation from the labor market means that women may not meet the requirements to receive Social Security based upon their own work history, or that they will have extremely low average wages upon which their Social Security benefit is based. A lack of employment continuity also reduces the likelihood of becoming vested in a pension plan. This separation from the labor market, though not entirely absent, was far less prevalent among African American women, and so we would expect less of an effect of marriage on black women's employment experience.

<u>Childrearing</u>

Raising children may *indirectly* affect late-life income via its impact upon labor force participation, employment continuity, and average lifetime wage (Waldfogel 1997, Budig and England 2001, VanVelsor and O'Rand 1984, Smith and Moen 1988, Pienta 1999). Kingson and O'Grady-Leshane (1993) determined that the number of children a woman raised reduced the total number of years that she spent in the labor force, for instance. Given that Social Security and pension benefits are predicated upon a persons' labor market performance, low-wage, discontinuous, minimal labor force participation by mothers would result in relatively poor benefits, *ceteris paribus*. And of course the discontinuity, plus the likelihood of being in a part-time or contingent job, would limit the likelihood of even accessing a pension. O'Rand and Landerman (1984), for instance, found that the number of children a woman had was not only detrimental to wage, but also reduced their likelihood of being in an industry that typically provides pensions.

<u>Mid-Life Caregiving</u>

The impact of mid-life caregiving for elderly parents or grandchildren on late-life income can work primarily through early exit from the labor force (Pavalko and Artis 1997), which in turn will reduce the average lifetime wages upon which Social Security benefits are based (Kingson and O'Grady-Leshane 1993). Early exit or reduced hours may also jeopardize a person's access to the full benefits of a pension.

RESEARCH QUESTIONS AND HYPOTHESES

The evidence establishing a relationship between marital history, fertility, other forms of caregiving, and worklife characteristics among women (Path FW in Figure 1) is well established (Waldfogel 1997, Budig and England 2001, VanVelsor and O'Rand 1984, Smith and Moen 1988, Pienta 1999, Goldin 1990). Research considering the relationship of worklife characteristics and late-life income among women (Path WI in Figure 1), particularly research that is race-sensitive, is not as established, and there is even less research defining the relationship between all three factors (family formation patterns, worklife characteristics, and late-life income) among women.

Figure 1. General Pathways Between Family Formation,
Worklife, and Late-Life Income
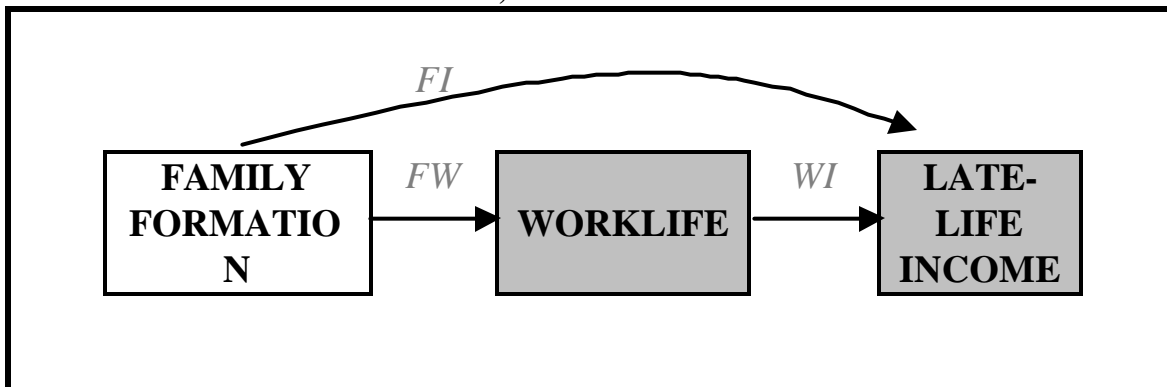
We attempt to fill in the research gaps here by explicitly considering the effect of family formation behaviors throughout the life course on women's late-life income. Using OLS regressions, we examine the overall association between these two sets of variables, and then we also consider the mediating role that worklife characteristics play in the relationship. So essentially we obtain evidence regarding the direct and indirect effects of family formation on elderly women's financial well-being. Figure 2 reveals the detailed pathways which we suspect connect family composition and worklife characteristics with late-life economic well-being for women.

Due to data limitations, most past work on this topic has not sufficiently examined racial/ethnic differences in the role of family composition on late-life income. The fact is, though, that worklife returns to family formation differ by race, and presumably late-life income returns to family formation will differ racially, as well. Only including race as a control variable would mask potential race differences in the association of late-life income with family composition. Therefore, we run all analyses separately by race.

Figure 2. Detailed Pathways Between Family Formation, Worklife, and Late-Life Income
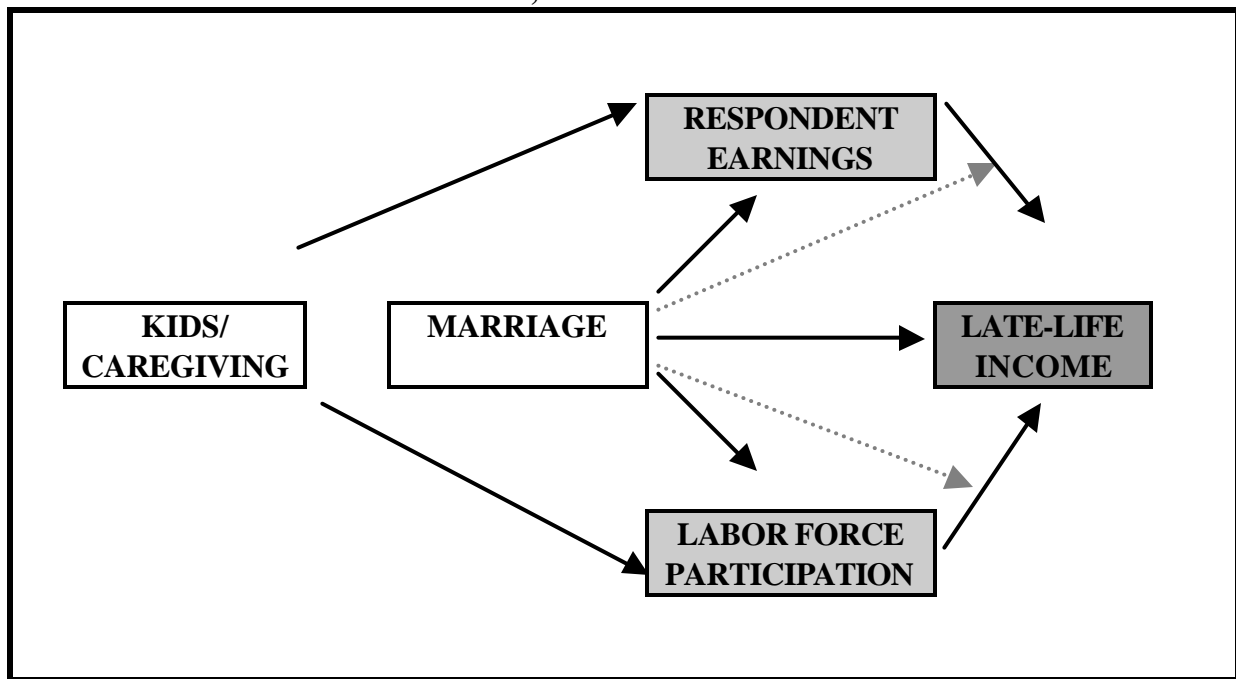
DATA AND METHODS

<u>Data</u>

We use the 1992 Health and Retirement Survey (HRS) public-use data, which is a sample of 7607 households that contain at least one person born between 1931 and 1941 (thus, aged 51 to 61 at time of survey). The data includes oversamples of African American households, and, when weighted, is considered nationally representative of race/ethnicity, marital status, and age. The HRS includes basic demographic and employment information, as well as information regarding the present income sources of each respondent and their spouse. Of special importance to us is the ability to link the HRS public-use data with each consenting respondent's actual Social Security records via the HRS Restricted Summary of Social Security Earnings and Projected Benefits File and the HRS Restricted Social Security Earnings File, as well as their pension plan information, and projected pension benefits based upon this information (contained in the HRS Restricted Pension Present Value Database). These linkages produce quite reliable information regarding a person's past work history, as well as their estimated Social Security and pension benefits (Juster and Suzman 1995).

In our sample, we include the cohort of African American and White women born between 1931 and 1941. Because the HRS doesn't collect complete information regarding the Social Security benefits of most women who were widowed, separated, or divorced at the time survey, but who had previously been married for at least 10 years, we exclude them from our sample. Thus, the sample includes currently-married women, never-married women, and women who have been previously married for less than 10 years (this last group of women are not eligible for benefits based upon their ex-spouses work history, so we should be able to get an accurate measure of their Social Security income, despite the absence of Social Security information regarding their ex-spouses). Also due to their

omission from Social Security records, any respondent who was receiving disability, or who had a spouse receiving disability at survey time, is excluded from our sample. Finally, only those respondents who provided full information regarding their pensions, and gave permission for their Social Security and pension records to be included in the HRS datasets, are included. Our final sample size is 2235.

Dependent Variables

Our primary dependent variable measures financial well-being in terms of (the natural log of) an annual income flow, standardized to 1992 dollars. Since we assume that resources are pooled between spouses, the income measures shown include benefits for both the husband and wife for married couples, while for nonmarried women, all pension and Social Security income is based entirely on their own worklife characteristics. We base our income estimates on the projected Social Security and pension benefits derived from the HRS restricted datasets. In order to derive these projections, the Institute for Survey Research (ISR) calculated projected wealth using complex algorithms that considered the Social Security and pension plan characteristics, and life expectancies, of each respondent and their spouse, and assumed retirement occurred at age 62. Assumptions regarding the economic environment also were included in the computational algorithms for pension and Social Security wealth (Gustman et al. 1999, Mitchell et al. 1999). We divided each respondent's projected wealth by an estimate of the number of years she will live beyond age 62 (National Center for Health Statistics 1996) in order to transform the wealth measure into an estimate of annual income.

This Social Security and pension data derived from these HRS datasets is considered extremely reliable. However, since we are only including pension and Social Security income in our measure, we are underestimating the overall late-life income of these women. Our omission of assets from the dependent variable also means that, if anything, we are likely underestimating race differences in overall

income. Though we plan to add asset income to our measure in the future, we do consider the present

measure to be of value, given that the bulk of late-life income is derived from these two sources.

Predictors

To model family formation characteristics, we consider women's marital history, and their

experiences as caregivers. We measure marriage via a dichotomized variable of current marital status,

grouping married persons in one category, and all divorced, separated, or never married persons in the

other. Though this does not explicitly indicate marital *history*, per se, it is highly correlated with other

variables regarding marital history that we did test in our models. Furthermore, marital status around

retirement proves crucial to women's late-life income projections, given the Social Security policies

regarding spousal and survivor benefits. Current marital status is also an indicator of respondent

household size at interview time, since most married women are presumably co-habiting with their

spouse, while most unmarried women are presumably living alone.

As an indicator of early-life caregiving, we include a variable to denote the number of biological

or adopted children that each respondent reports. To capture the potential role of caregiving in later

life, we also include a variable that measures the number of hours the respondent spent in the past year

caring for their grandchildren or parents.

We measure two dimensions of respondent's worklife: their employment history, and their

earnings history. To measure labor supply, we use the sum of the annual quarters of Social Security-

covered employment documented in each woman's Social Security file for the period from 1951 to

1991. In addition to indicating general labor force participation, quarters of covered employment is also

crucial in determining late-life income because, for the most part, people must accrue 40 quarters of

coverage throughout their worklife in order to qualify for Social Security benefits based on their own

work history. Since continuity of employment can also impact late-life earnings, particularly pension

vestment, in results not shown, we tested two indicators of this (length of longest job, any job ever held

for 5 or more years).   In our test models, though, employment continuity was closely related to quarters

of coverage, so we omit it from our analyses.

We use the Annual Indexed Monthly Earnings (AIME), also derived from the Social Security

data, as a measure of women's earnings level. This essentially measures annual monthly earnings for the

years 1951 through 1991, standardized to 1992 dollars, and topcoded at the annual taxable maximum

(which, for instance, in 1992 was $53,400), with the five lowest earnings years omitted from the final

calculations. As with quarters covered, the AIME is based upon Social Security-covered employment

only. The definition of what is and is not covered by Social Security has changed since the 1950s, but

in general, some agricultural and domestic workers have been excluded from full Social Security

coverage, as have some self-employed persons, and persons employed by Federal, state, and local

governments. As of 1992, though, over 95% of the workforce did have Social Security coverage

(Mitchell et al. 1999). We can think of this measure as capturing effects both of how high a woman's

wage or salary rate was, as well as how much she worked. Thus, it is a kind of summary measure of

how much women earned in their lifetimes, reflecting both differences in amount of employment and

amount earned per hour.

We also include controls for the respondent's age, as well as if they were born in the U.S. or

not. Respondents are classified as to whether they are high school dropouts, possess a high school

degree only, or possess a college degree. The respondent's region of residence at the time of the

survey is also included, as a proxy for the respondent's residence throughout their life. A 5-point self-

reported health scale is also included at the time of survey.

We estimate OLS regressions on the log of projected annual income, with separate analyses for Whites and African Americans. In order to measure the overall effect of family formation and caregiving characteristics on late-life income, our first regression model includes family formation and caregiving variables, as well as the control variables. Then in order to determine how much of these family effects are operating through employment characteristics, we include models that add labor supply (quarters of covered employment) and average earnings (AIME) measures. We are also interested in whether the effects of women's employment history are greater for single than married women, since much of their income in retirement will come from their own work history. To assess this, we interact quarters of covered employment and earnings each with current marital status.

RESULTS

Means

Table 1 contains means for all variables, separately for White and African American women. **Projected median annual retirement income from Social Security and pensions is about $8800 for African American women, and just over $11,000 for White women. While the race difference is large and significant, it is also striking how low an average household income figure this is for both groups, especially considering that in many cases this income is supporting a two-person household.** These are estimates of what this cohort of women would have to retire on at age 62 if there was no income from saved wealth or other sources than pension and Social Security from the respondent and, where applicable, her spouse.

The women in the sample averaged 56 years of age at the time of the survey. Over 90% of both Black and White women were born in the U.S. A much higher proportion of White than African American women was currently married (94% of Whites and 69% of Blacks). Recall that our sample excluded excludes separated, divorced, and widowed women who were married for at least 10 years since these women would have been eligible for Social Security benefits based on their husband's employment record, but HRS did not link to ex-husbands' Social Security records. Thus the proportion of both Black and White women not currently married would be higher if these women were included. This cohort of women averaged over 3 children, with the average somewhat higher for African American women (3.08 versus 3.45). African American women report slightly more hours of caring for grandchildren or parents (438 hours/year compared to 313, a difference that is significant only on a one tailed test).

Turning to the worklife variables, this cohort of women had averaged about 16-17 years of employment covered by Social Security by their average age of 56. Thus, many had spent a good deal of their adult life out of paid employment. But there are race differences here, with African American women having the equivalent of about 17 years of coverage (67.54 quarters), while White women having about 16 years (63.28 quarters). The annual indexed monthly earnings is slightly higher for African American women ($589) than for White women ($578), which seems surprising at first glance because Black women earn less per hour. However, the proportion of White women in this cohort who never entered the workforce is much higher than for Blacks, and more White women worked part-year or part-time; if only women who actually spent time in the workforce were included in these denominators, the monthly earnings for Whites would be markedly higher than those of African Americans. Thus, Black women's AIMEs are higher because of their more continuous employment relative to White women in this cohort.

Among control variables, we see well-known educational differences by race and a greater concentration of African American women in the South.

Regressions

Tables 2 and 3 present regression results for White and African American women, respectively. For each group we ran 5 models, adding alternative or successive variables, explained below. Since the dependent variable is the natural log of projected annual income in retirement, coefficients, when multiplied times 100 provide an estimate of the effect of a one unit change in the independent variable.[1]

---

[1] Strictly speaking, the effect of a one unit change in the independent variable is $100 (e^{b} - 1)$, rather than simply $b(100)$. However, this transformation changes the coefficient little unless it is quite large; thus for simplicity, we discuss effects as $b(100)$.

The strongest finding is the strong effect of current marital status on annual household income, which is significant for both African American and White women. This can be seen in Models 1, 2, and 4.[2] Whether or not women's own employment history is controlled, currently having a husband approximately doubles women's projected household income at retirement. The coefficients of .881 to1.068 in Models 1,2, and 5 for White women indicate an income increase for being married of approximately 88% to 107%. For Black women the analogous increases from marriage are even bigger, from 116% to 125%. If it cost twice as much to support a two-person household as a one person household, then a doubling of income by virtue of marriage would mean exactly no effect on a woman's standard of living. However, there are large economies of scale, particularly in housing, where two married people use little more space than one, and in consumer durables (where two people can share one bed, television, computer, refrigerator, stove, lawn mower, car, microwave, etc. with little or no loss of access). The large economies of scale in household living imply that an effect that approximately doubles household income by virtue of current marriage is undoubtedly indicative of a large positive effect of marriage on women's retirement standard of living. **Effects of marriage are large for both Black and White women, but since many more Black than White women enter retirement single, the proportion of the Black female population that is adversely affected by the "singlehood penalty" is much higher than the proportion of the female White population.**

Our major interest is in the effects of how many children women had (and thus probably cared for) on late-life income. **Table 2 shows that for White women, each child reduces a woman's**

_____

[2] Models 3 and 5 contain interactions of marital status with work history variables; thus, in these models, the coefficients on current marriage reflect its effect only for those whose score on the work history variables is 0, that is for women with no Social Security employment history.

projected retirement income by 3.2%. This can be seen as a "caretaking penalty." [3] This is a "total effect" from Model 1, which does not control for quarters of employment or Annual Indexed Monthly Earnings reported to Social Security; thus it includes effects of children coming through these intervening variables. The coefficient for number of children is of a similar magnitude for Black women, but is not statistically significant. However, in results not shown, when we pooled Blacks and Whites and ran Model 1 including race and an interaction between race and number of children, the interaction was not significant, implying that there is no significant race difference in the size of the coefficient. If we go by this, we would conclude that the caretaking penalty from rearing your own children exists for both Black and White women; if we go by the nonsignificance in the Black regression we would conclude the effect is not present for Black women. Thus, we cannot really make a firm conclusion for African American women. Of course, the small sample size of Black women (312) makes it more difficult to attain significance of findings for Blacks or for race differences in coefficients.

Our next step was to see how much of this child penalty was explained by the impact of children on women's past employment history and wage level. **Models 2 and 4 show positive effects of number of quarters covered and AIME (earnings reported to Social Security) on retirement income for both White and Black women.** These models also show that, for Whites, the inclusion of either of these worklife controls reduces the size of the negative child effect, as expected (Table 2, Models 2 and 4). Indeed, when we control for AIME, the effect of children is reduced to nonsignificance (Table 2, Model 4). **This implies that the adverse effect of children on women's retirement income is due to the fact that children lower women's lifetime earnings, through**

---

[3] In results not shown, we interacted number of children with marital status. For white women, this interaction was significant and revealed that the effect of children on women's retirement income is much larger for single than

some combination of fewer years of employment and lower earnings when they were employed.

Models 3 and 5 in Tables 2 and 3 add interactions between the work history variables and current marital status. The interactions are in the expected negative direction for both White and Black women; interactions with both quarters of employment and AIME earnings are significant for White women while only the latter is significant for Black women. **The interactions show that the effects of women's own employment and earnings on their projected household retirement income are much greater if they are single than if they are married. Indeed, there is virtually no effect of women's quarters of employment for married White women, though the effect is highly significant for single White women. The effects of reported average earnings are about half for married women what they are for single women.[4]**

There is also a second care-taking penalty. **White women who spent time during the last year caring for grandchildren or their own parents have lower projected retirement income.** The effect is such that if a woman spent 1000 hours in kin-care last year, her income is 4.8% lower (Table 2, Model 1)[5] than it would be in the absence of that care. The effect is not statistically significant

---

[4] married women. This makes sense, since such a large share of married women's retirement income comes from their husband's pension and Social Security entitlements, which have not been adversely affected by children.

[4] In Table 2, Model 3, the coefficient on Quarters of Covered Employment gives the effect of this variable for single women, while the interaction tells how much less the effect is for married women. This follows from the rule that, in a model with an interaction between two variables, X and Y, the "additive" coefficients on variable X is interpreted as the effect of X when Y is 0. When marital status is 0, it indicates currently unmarried women. Thus, the effect of each quarter of coverage is 1.32% for single women (.0132 X 100), while the effect for married women is only .12% ((.0132 - .0120)(100)=.0012). Model 5 shows that effects of AIME earnings are about half for married women what they are for single women for both Blacks and Whites.

[5] At first glance, this effect seems odd, because, unlike our employment history variables, which cover most of a lifetime, this is the number of hours spent in caring for grandchildren or parents the year before the survey among women already close to retirement. Current time in such care giving could not affect much of the past of one's employment history, which is consistent with the fact that the effect is not reduced much in Models 2 and 4. But what is the mechanism by which it could affect retirement income? Our best guess is that current time in such caretaking is correlated to past time in such caretaking, which has affected earnings in ways not fully captured by

for Black women, although, as with the child penalty, when we pooled by race we found no significant difference in the effects by race, making the question of whether this penalty exists for Black women ambiguous (results not shown).

Effects of control variables are not relevant to our central questions, but of some interest nonetheless. For both Black and White women, projected retirement income is less if they are foreign born, have less education, or classified their current health as poor. These effects are net of children, kin care giving, marital status, and the woman's employment and earnings history. We suspect that these effects are partly picking up the income of the husbands these women are married to, given patterns of marital homogamy.

Social Security wages. Also, this may be picking up some spurious effects of social class as measured by husband's earnings, and reflecting the fact that kin caregiving is more common in the working class.

DISCUSSION AND CONCLUSIONS

To summarize our major empirical findings:

- Being married around the time of retirement approximately doubles both Black and White women's projected household retirement income. This implies that, given economies of scale associated with cohabiting, married women have a higher standard of living than single women, *ceteris paribus*.

- Since fewer Black women are married than White women, this "singlehood penalty" has a direct, adverse effect on Black women's income and standard of living on an aggregate level.

- Average earnings and length of employment history of both Black and White women positively affect their retirement income.

- These effects are, of course, much stronger for women who are single as they enter retirement, since their pensions and Social Security benefits are based entirely upon their own employment histories.

- This mediating effect of marriage on the relationship between worklife and late-life income is stronger for Whites than African Americans (but may relate in part to a small African American sample size).

- Having reared children or participated in mid-life caregiving is negatively associated with women's retirement income.

- This effect seems much stronger for Whites than African Americans but, again, the racial difference may relate, in part, to sample size differences.

- For Whites, the negative effect of children seems to be operating primarily through the average earnings measure (AIME).

These results are strongly suggestive, but there are caveats regarding their generalizability. Of

course, women who are currently single but were married at least 10 years qualify for a spousal

benefit under Social Security, but because the HRS did not link to these women's ex-husbands'

Social Security files, we excluded such women from the sample. As such, our conclusions about

single women should be understood as pertaining only to those women never married for 10 years.

Also, because our dependent variable at this point excludes asset measures, we are underestimating

late-life household income, and we may be underestimating some race differences and intra-race income variability, given the disproportionate accrual of assets by persons with higher incomes. We hope to add an asset measure in our future work, and to include some Hispanic subgroups into our analysis, as well. More importantly, to better understand the policy implications of the effects of family formation on late-life income, we plan to disaggregate our dependent variable into it's components (Social Security benefits, pension benefits, assets), in order to better understand the pathways through which each dimension of family structure and caregiving is operating to affect women's late-life income.

BIBLIOGRAPHY

Budig, Michelle J. and Paula England. 2001 . 'The Wage Penalty for Motherhood' <u>American Sociological Review</u> 66:204-225.

Burkhauser, Richard V., Greg J. Duncan and Richard Hauser. 1994. 'Sharing Prosperity Across the Age Distribution: A Comparison of the United States and Germany in the 1980s' <u>The Gerontologist</u> 34:150-160.

Crystal, Stephen. 1995. 'Economic Status of the Elderly' in <u>Handbook of Aging in the Social Sciences</u>, edited by Robert H. Binstock and Linda K. George. San Diego, California: Academic Press.

Danziger, Sheldon and Gottschalk, Peter. 1995. <u>America Unequal</u>. New York, New York: Russell Sage.

Goldin, Claudia. 1990. <u>Understanding the Gender Gap: An Economic History of American Women</u>. New York, New York: Oxford University Press.

Gustman, Alan L., Olivia S. Mitchell, Andrew A. Samwick, and Thomas L. Steinmeier. 1999. 'Evaluating Pension Entitlements' in <u>Forecasting Retirement Needs and Retirement Wealth</u>, edited by Olivia S. Mitchell, P. Brett Hammond, Anna M. Rappaport. Philadelphia, Pennsylvania: University of Pennsylvania.

Honig, Marjorie. 2000. 'Minorities Face Retirement' in <u>Forecasting Retirement Needs and Retirement Wealth</u>, edited by Olivia S. Mitchell, P. Brett Hammond, Anna M. Rappaport. Philadelphia, Pennsylvania: University of Pennsylvania.

Hurd, Michael D. and David A. Wise. 1989. 'The Wealth and Poverty of Widows: Assets Before and After the Husband's Death' in <u>The Economics of Aging</u>, edited by David A. Wise. Chicago, Illinois: University of Chicago Press.

Juster, F. Thomas and Richard Suzman. 1995. 'An Overview of the Health and Retirement Study' <u>Journal of Human Resources</u> 30: S7-S56.

Kingson, Eric R. and Edward D. Berkowitz. <u>Social Security and Medicare: A Policy Primer.</u> Westport, Connecticut: Auburn House.

Kingson, Eric R. and O'Grady-Leshane, Regina. 1993. 'The Effects of Caregiving on Women's Social Security Benefits' <u>The Gerontologist</u> 33:230-239.

Krecker, Margaret L. and Angela M. O'Rand. 1991. 'Contested Milieux: Small Firms, Unionization, and the Provision of Protective Structures' <u>Sociological Forum</u> 6:93-117.

Levine, Phillip B., Olivia S. Mitchell and James F. Moore. 2000a. 'Women on the Verge of Retirement: Predictors of Retiree Wellbeing' in <u>Forecasting Retirement Needs and Retirement Wealth</u>, edited by Olivia S. Mitchell, P. Brett Hammond, Anna M. Rappaport. Philadelphia, Pennsylvania: University of Pennsylvania.

Levine, Phillip B., Olivia S. Mitchell and John W.R. Phillips. 2000b. 'A Benefit of One's Own: Older Women's Social Security Retirement Entitlements' Working Paper. Pension Research Council, University of Pennsylvania.

Mitchell, Olivia S., Jan Olson and Thomas L. Steinmeier. 1999. 'Social Security Earnings and Projected Benefits' in <u>Forecasting Retirement Needs and Retirement Wealth</u>, edited by Olivia S. Mitchell, P. Brett Hammond, Anna M. Rappaport. Philadelphia, Pennsylvania: University of Pennsylvania.

National Center for Health Statistics. 1996. <u>Vital Statistics of the United States, 1992, vol. II, sec 6: Life Tables.</u> Washington, D.C.: Public Health Service.

O'Rand, Angela M. and John C. Henretta. 2000. <u>Age and Inequality: Diverse Pathways Through Later Life</u>. Boulder, Colorado: Westview Press.

O'Rand, Angela M. and Richard Landerman. 1984. 'Women's and Men's Retirement Income Status: Early Family Role Effects' <u>Research on Aging</u> 6:25-44.

Pavalko, Eliza K. And Julie E. Artis. 1997. 'Caregiving and Paid Work: Relationships in Late Midlife' <u>Journal of Gerontology B-Psychology</u> 52: S170-S179.

Pienta, Amy. 1999. 'Early Childbearing Patterns and Women's Labor Force Behavior in Later Life' <u>Journal of Women and Aging</u> 11:69-84.

Schultz, James H. 1995. 'Economic Security Policies' in <u>Handbook of Aging in the Social Sciences</u>, edited by Robert H. Binstock and Linda K. George. San Diego, California: Academic Press.

Smith, Ken R. and Phyllis Moen. 1988. 'Passage Through Midlife: Women's Changing Family Roles and Economic Well-Being' <u>Sociological Quarterly</u> 29:503-524.

VanVelsor, Ellen and Angela M. O'Rand. 1984. 'Family Life Cycle, Work Career Patterns, and Women's Wages at Midlife' Journal of Marriage and the Family 46: 365-373.

Waldfogel, Jane. 1997. 'The Effects of Children on Women's Wages' <u>American Sociological Review</u> 62:209-217.

Weir, David R. and Robert J. Willis 2000. 'Prospects for Widow Poverty' in <u>Forecasting Retirement Needs and Retirement Wealth</u>, edited by Olivia S. Mitchell, P. Brett Hammond, Anna M. Rappaport. Philadelphia, Pennsylvania: University of Pennsylvania.

Table 1. Respondent Characteristics

	White	African American
Median Income**	$11,168.53	$8764.83
Family Formation and Caregiving		
Current Marital Status***		
Married	.94	.69
Not Married	.06	.31
Number of Biological/Adopted Children*	3.08	3.45
	(1.89)	(2.50)
Annual Hours Caring for	313	438
Grandchild or Parent	(779)	(993)
Work Life		
Quarters of Covered Employment (QC)	63.28	67.54
	(41.04)	(45.32)
Annual Indexed Monthly Earnings (AIME)	577.55	589.17
	(589.53)	(620.03)
Background		
Age	56	56
	(3.15)	(3.24)
Proportion Foreign-Born	.09	.08
Proportion w/High School Degree***	.78	.62
Proportion w/College Degree*	.18	.13
Current Region of Residence***		
Northeast	.17	.21
MidWest	.28	.19
South	.29	.45
West	.26	.15
Current Health Status Rating***	2.43	2.98
(1=Excellent, 5=Poor)	(1.26)	(1.55)
N	1923	312

Standard Deviations in Parentheses

Significance of Race Differences: ***p<.0001   **p<.01   *p<.05

Table 2. OLS Regression on Predicted Log Annual Income, Whites

	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	8.278***	8.136***	7.098***	8.039***	7.525***
Family and Caregiving					
Currently Married	*.881***	*.949***	*2.148***	*1.068***	*1.664***
Number of Children	*-.032** *	*-.024** *	*-.022* *	*-.016*	*-.016*
Annual Hours Caring for Grandchild or Parent	*-.000048* *	*-.000042* *	*-.000038*	*-.000033*	*-.000030*
Work Life					
Quarters of Covered Employment (QC)	---	*.002***	*.0132***	---	---
QC*Currently Married	---	---	*-.012***	---	---
Annual Indexed Monthly Earnings (AIME)	---	---	---	*.000295***	*.000724***
AIME*Currently Married	---				*-.000493***
Background					
Age	.005	.004	.0019	.003	.002
Foreign-Born	-.195**	-.169**	-.168**	-.165**	-.166**
Education (Omitted=No HS Degree)					
High School Degree	.320***	.295***	.286***	.253***	.242***
College Degree	.560***	.533***	.527***	.427***	.414***
Current Region of Residence (Omitted=South)					
Northeast	.077	.072	.079	.0059	.067
Midwest	.092*	.097*	.084*	.104*	.090*
West	-.013	.0002	.002	.008	.009
Current Health Status Rating (1=Excellent, 5=Poor)	-.108***	-.104***	-.103***	-.010***	-.100***
R-Square	.2603	.2715	.2944	.3146	.3346

*** $p<.0001$ **$p<.01$ *$p<.05$

Table 3. OLS Regression on Predicted Log Annual Income, African Americans

	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	7.164***	7.142***	6.749***	7.123***	6.766***
Family and Caregiving					
Currently Married	*1.166****	*1.29****	*1.807****	*1.255****	*1.508****
Number of Children	*-.024*	*.001*	*.002*	*.002*	*.001*
Annual Hours Caring for Grandchild or Parent	*.000022*	*.000012*	*.000013*	*.000014*	*.000014*
Work Life					
Quarters of Covered Employment (QC)	---	*.006****	*.010****	---	---
QC*Currently Married	---	---	*-.005*	---	---
Annual Indexed Monthly Earnings (AIME)	---	---	---	*.000526****	*.000744****
AIME*Currently Married	---	---	---	---	*-.00030**
Background					
Age	.017	.006	.005	.009	.012
Foreign-Born	-.541**	-.384*	-.315	-.442**	-.401*
Education (Omitted=No HS Degree)					
High School Degree	.416***	.366***	.352***	.323***	-.317***
College Degree	.888***	.878***	.865***	.673***	.657***
Current Region of Residence (Omitted=South)					
Northeast	.406**	.353**	.369**	.273**	.282**
Midwest	.377**	.380**	.378**	.335**	.326**
West	.060	.051	.058	.043	.043
Current Health Status Rating (1=Excellent, 5=Poor)	-.108**	-.078*	-.091*	-.080*	-.091**
R-Square	.5365	.5946	.6016	.6546	.6671

*** p<.0001   **p<.01   *p<.05