Divergent Pathways: An Examination of Race Differences in Women's Labor Force Exit Patterns

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ABSTRACT

This study uses five waves of panel data from the Health and Retirement Study (HRS) in tandem with multivariate event history models and a life course perspective to explore racial disparities in labor force exit behavior among women. Analyses suggest that Black women are disadvantaged relative to White women with respect to educational attainment, work and family patterns, income, wealth, and health, and that these disparities underlie race differences in labor force exit patterns. Specifically, compared to White women, Black women are less likely to exit the labor force via retirement and are more likely to exit the labor force due to a disability. Theoretical implications of this study and policy relevance are also discussed.

INTRODUCTION

The literature has shown evidence of race differences in retirement behavior. However, most of the research on racial disparities in labor force exit behavior has overlooked women, with only a few exceptions. Researchers have found that Black women have more continuous patterns of work throughout the life course than White women (Belgrave, 1988), a finding opposite that found among men, which suggests that the race-retirement relationship may vary by gender. This underscores the need for further research on race differences in women's labor force exit pathways. The few studies that have explored race differences in women's retirement have used different cohorts and measurement strategies and have shown mixed results. For instance, Belgrave's (1988) study of women born between 1917 and 1921, used cross-sectional data and labor force participation rates (LFPRs) to demonstrate that Black women have more continuous patterns of labor force participation throughout the life course. Pienta, Burr, and Mutchler's (1994) cross-sectional analysis of the 1920 to 1929 birth cohort, on the other hand, operationalized women's labor force participation as full-time work, part-time work, or not working. They found no significant race differences in women's labor force statuses.

Although LFPRs have been the basis for much of the previous retirement research, LFPRs have masked important race differences that are revealed by further classifying individuals who have exited the labor force into disabled and non-disabled groups (Hayward, Friedman, and Chen, 1996). Distinguishing between alternative pathways out of the labor force (e.g. retirement and work-disability) rather than relying

solely on labor force participation rates may provide additional insight into the race-labor force exit behavior relationship among women and thus imply different policy targets.

This study explores race differences in women's labor force exit patterns, using retirement and work-disability as competing outcomes, with attention to the intervening effects of sociodemographic characteristics, work and family patterns, health, and wealth. In sum, I aim to address two primary research questions:

1. Do Black and White women in the labor force at midlife exhibit different rates of retirement and work-disability?
2. Do race differences in women's labor force exit behavior stem from race differences in educational attainment, work and family histories, income, wealth, and health?

Below, I begin with a general discussion of how race is a central stratifying feature of the life course and how the disadvantages associated with being Black, instead of White, accumulate over time and have consequences for a wide array of life chances. Second, I argue that Blacks' disadvantages, relative to Whites, are likely to result in race differences in rates of retirement and work-disability among women at midlife. Third, I discuss the research design and analytic strategy used to investigate the research questions presented above. Fourth, I present and describe the results of the analyses. Lastly, I briefly summarize, contextualize and delimit the key contributions this study stands to make.

Race, Cumulative Disadvantage, and Labor Force Exit Behavior

Much of the previous research on labor force exit patterns has been based on the retirement behavior of White men; however, retirement models based on the labor force exit patterns of White men may be inadequate for explaining the labor force exit behavior of women, ethnic minorities, and the chronically poor or ill (Burr, Massagli, Mutchler and Pienta, 1996; Gibson, 1987; Pienta, Burr and Mutchler, 1994). These groups are disadvantaged in terms of levels of material, social, and human capital. Given well-documented race differences in a wide array of circumstances across the life course including educational attainment, health, wealth, and work and family patterns—and that these factors shape labor force behavior—a cumulative disadvantage framework is likely to be useful for devising a model of race and labor force exit patterns among women.

Cumulative disadvantage theory asserts that social inequalities in later life are a result of the interaction of institutional arrangements and aggregated individual actions over time (Dannefer, 1987, 2003; O'Rand, 1996). This line of theorizing can be traced back to Robert Merton's (1968) earlier attempts at explaining aged heterogeneity through the process termed the "Mathew effect" –referring to a verse in the bible in the book of Mathew which states that "For unto every one that hath shall be given and he shall have abundance; but from him that hath not shall be taken away even that which he hath." This study explores the possibility that race differences in labor force exit behavior may be a consequence of Black women's greater lifelong disadvantage with respect to education, income, work and family patterns, wealth, and health.

Race, Education, Occupation, and Earnings

Early status attainment research has established the importance of education for a variety of subsequent outcomes such as one's occupation and earrings (Blau and Duncan, 1967). Importantly, racial differences in educational attainment exist, especially among today's elderly: whereas 72% of today's elderly Whites graduated from high school, only 45% of their Black counter parts did so. Racial disparities in college education are even greater: among today's elderly, Whites are more than twice as likely as Blacks (16.5% vs. 7%) to have graduated with a bachelor's degree (U.S. Department of Education, 2000). Not surprisingly, racial disparities in educational attainment are reflected in the occupational patterns of Black and White women. Since a great proportion of White women had at least a high school education and were encouraged to develop shorthand, typing, and other clerical skills in school, they were able to work in white-collar occupations. Today's elderly Black women, however, were disproportionately represented in domestic service and blue-collar jobs as result of racial exclusion and low levels of formal education (Newman, 2003). In general, elderly Black and White women have encountered very different circumstances in terms of education and employment.

These racial differences in educational attainment and occupations result in racial disparities in earnings among women. The good news, however, is that the income gap between Black and White women is narrowing. Whereas earnings for Black women were only 65% of their White counterparts in 1960, by 1980 this figure jumped to 92% (Newman, 2003). Nonetheless, Black women remain at a disadvantage, compared to White women, with respect to earnings and this is likely to result in race differences in labor force exit patterns.

Race, Family Patterns, and Wealth

Clearly research on racial difference in earnings among women is informative, however, due to significant racial differences in family patterns, focusing on economic resources at the individual level instead of at the household level is likely to underestimate racial differences in economic well-being. Linda Waite's (1995) research on the economic benefits of marriage is clear: married women have greater economic resources at the household-level as well as per capita than unmarried women. Given that Black women are significantly less likely than White women to ever marry and more likely to get divorced (Current Population Reports, 1998), one would expect Black women to fair worse than White women in terms of economic well-being. Indeed, racial differences in wealth are dramatic. While the median household net worth among Whites in 1990 was $44,408, Black's median household net worth was $ 4,604 (Eller, 1994). Even more striking is the fact that the racial gap in wealth is widest at lower levels of income. Among individuals in the lowest quintile of income in the U.S., the net worth of whites is 10,000 times higher that that of Blacks ($10,257 vs. $1) (Eller, 1994).

Race differences in home ownership and home value contribute substantially to racial disparities in the distribution of wealth (Quadagno and Reid, 1996). In 1994, whereas 64% of Whites owned their homes, only 43.4% of Blacks owned their homes (U.S. Bureau of Census, 1996). Further, while the average home equity value for Whites was $78,708 in 1992, Black's average home equity value was just $36,658 (Angel and Angel, 1996). Thus, racial disparities in education, occupations, earnings, family patterns, and wealth place Black women in a more precarious economic situation than their White counterparts.

Race, SES, and Health

An association between material resources and health is well established. In general, individuals with higher levels of SES are in better health. Evidence also suggests that this SES gradient in health is largest at lower levels of SES—indicating diminishing returns of SES for health at higher levels of SES (Smith and Kington, 1997). While previous research has demonstrated that the SES-health relationship is bidirectional (Smith, 1999), Link and Phelan (1995) have cogently argued for conceptualizing SES as a 'fundamental cause' of disease and have outlined a number of mechanism through which low SES results in poorer health. Several plausible explanations have been posited to account for the persistent SES-health relationship including SES differences in 1) risky behaviors, 2) access to health care and nutritious foods, 3) exposure to stressful life events, and 4) exposure to toxic substances. Link and Phelan (1995) conclude that while the intermediary mechanisms through which SES affects health varies across contexts and time, the SES-health relationship persists and, thus, social research and policy initiatives ought to pay greater attention to the ways in which social conditions affect health.

Given the SES gradient in health and the fact that Blacks are disadvantaged compared to Whites in terms of core components of SES—education, occupation, income and wealth—one would expect Blacks to exhibit poorer health profiles than Whites. Indeed, Black women appear to have poorer health on a number of health indicators. For instance, whereas 19% of White women between the ages of 45 and 74 rate their health as either fair or poor, 35% of their Black counterparts do so (National Academy on an

Aging Society, 1999). While subjective accounts of health may be less than ideal, a similar pattern emerges with respect to chronic conditions and rates of disability. Compared to White women, Black women have a higher prevalence of diabetes, hypertension, heart disease, strokes, and functional loss (Blackwell, Collins, and Coles, 2002). Also, research by Manton and Gu (2001) suggests that Blacks have a substantially higher prevalence of disability than Whites, indicated by their higher rates of limitations in conducting activities of daily living (ADLs) and instrumental activities of daily living (IADLs). Thus, Black women are likely to be disadvantaged relative to White women in terms of education, family patterns, income, wealth, and health. The implications of these race differences for labor force exit behavior are discussed below.

Race and Retirement

Race differences in education, income, family patterns, wealth and health over the life course are likely to result in divergent labor force exit pathways among Black and White women. Marriage, household wealth, and pension coverage are all expected to be positively associated with the likelihood of exiting the labor force via retirement among women (Brown and Pienta, 2002). Since Black women are less likely than White women to be married, and have less household wealth, as noted above, they will likely exhibit lower rates of retirement. On the other hand, given Black women's higher labor market attachment throughout the life course (Belgrave, 1988), they are likely to have comparable—if not greater—rates of pension coverage and personal pension wealth. Overall, however, the net effects of these social and economic factors are expected to result in disproportionately low rates of retirement among Black women. Black women

may be more likely than White women to remain in the labor force in order to maintain a continuing source of income, or to delay retirement in order to accumulate wealth for later consumption during the retirement years.

Race and Work Disability

Transitions into the "work-disabled" status are also expected to vary by race. Specifically, Black women are expected to be more likely than White women to exit the labor force due to a disability. Poor health is strongly related to the likelihood of exiting the labor force due to a work-disability (Bound, Schoenbaum, and Waidmann, 1995; Hayward et al., 1996). Given Black women's poorer health profiles, compared to their White counterparts, Blacks are likely to exhibit significantly higher rates of work-disability. Although Wray (1996) found that in addition to health, job characteristics such as pension coverage, retiree health insurance, and spousal retirement benefits were partially responsible for Black males disproportionately high rates of disability, a number of high quality studies have found that reported health is a dominant and temporally proximate factor accounting for Black men's lower levels of labor force participation (Bound et al., 1995; Burr, Massagli, Mutchler, and Pienta, 1996; Hayward et al., 1996). Similarly, racial disparities in health among women are likely to underlie race differences in rates of work-disability.

In sum, a cumulative disadvantage perspective on the life course, in tandem with the literature related to race, SES, work and family patterns, and health, and how these factors are related to labor force behavior have served as a basis for several hypotheses:

1) Black women are likely to have lower rates of retirement than White women in later midlife, 2) Black women are likely to have higher rates of work-disability than White women in later midlife, and 3) these racial differences in labor force exit pathways are expected to stem from race differences in educational attainment, work and family histories, income, wealth, and health.

RESEARCH DESIGN AND METHODS

Data from waves 1 through 5 (1992 through 2000) of the Health and Retirement Study (HRS) is employed to investigate race differences in women's labor force exit patterns. The target population for Wave 1 of the HRS includes all English or Spanish-speaking adults in the contiguous United States, born during the years 1931 - 1941, who reside in households. Institutionalized persons (i.e. those in prisons, jails, nursing homes, long-term or dependent care facilities) are initially excluded from the survey population. However respondents are followed when they move from the household population into institutions.

Data was collected every two years via face-to-face (1992, and 1998) and telephone interviews (1994, 1996, and 2000), with response rates ranging between 89% and 82%. To allow independent analysis of key subgroups, the core sample is augmented by three supplements. These supplements are 1) a 1.86:1 oversample of Blacks, 2) a 1.72:1 oversample of Hispanics and 3) a 2:1 oversample of Floridians. The HRS is a valuable source for investigating race differences in retirement behavior because it has a diverse sample and extensive measures of known correlates of retirement behavior such

as sociodemographic factors, work and family histories, and measures of health and wealth.

Initial analyses are restricted to Black (n=1018) and White (n=4134) women between the ages of 51-61 in 1992. Since the primary focus of this study is on labor force exit behavior, subsequent analyses are further restricted to women who are in the labor force at the beginning of each interval.

Measurement of Labor Force Behavior

At each wave respondents were asked the question: "Are you working now, temporarily laid off, unemployed and looking for work, disabled and unable to work, retired, a homemaker, or what?" Since the primary focus of this study is on labor force exit behavior, women in the labor force at baseline are included in analyses until they exit the labor force via (1) retirement (ceasing work for pay and not work disabled or unemployed or laid-off), and (2) work-disability (ceasing work for pay as a result of a disability).

Retirement is becoming an increasingly ambiguous concept. Consequently, the "retired" and "working" states are not exact. Although the majority of the "retired" group self-identifies as retired, a relatively small proportion of the "retired" group includes respondents who stopped working and self-identified as a "homemaker" or "other" . Further, the "working" group includes women who recently ceased working for pay, yet self-identify as either temporarily laid off or actively looking for work. However, Hayward and colleagues (1996) concluded that while these states are loosely defined, they capture important race differences in labor force exit behavior that are masked by

relying solely on labor force participation rates; although respondents may reenter the labor force after reporting an exit via retirement or work disability, most do not, and this initial exit is clearly a disruption in the respondent's work history that marks the beginning of a process that often leads to a permanent exit from the labor force.

Measurement of Sociodemographic Characteristics

Race is a key analytic variable and is measured as a dummy variable (1= Black; 0= White). Older women are more likely than younger women to be outside of the labor force instead of being full-time workers (Pienta et al., 1994) and are more likely to stop working as a result of a work disability (Daly and Bound, 1996). *Age* (measured in years) at baseline is included in the multivariate analysis as a control variable to account for this age effect. A time-varying measure of age is also included in the hazard models in order to approximate aging over *time*. Respondent's *educational attainment* (measured in years of formal education) is also included as a control variable because it is likely to influence an array of factors such as occupation, income, wealth, health (House and Williams, 2000), and subsequent labor force transitions.

Measurement of Health

Measures of physical health such as *hypertension, stroke, heart disease, diabetes, chronic lung disease, psychological problems, arthritis***,** and *cancer* are included in the analyses. First, these were coded as dummy variables according to how the respondent answered the question, "Has a doctor ever told you that you have (had a) [condition]." A summary measure of the total number of the above conditions ever diagnosed is included

in the analyses. A measure of the respondent's *self-rated health* is also included (1=excellent, 2=very good, 3=good, 4=fair, 5=poor).

Measurement of Family Circumstances

Both present family circumstance and earlier social roles impact labor force behavior in later life (O'Rand et al., 1992). Previous research has shown that single parenthood experiences affect women's retirement behavior (Brown and Pienta, 2002). Women typically enter single parenthood via one of two pathways. First, women may become single mothers as a result of a *nonmarital first birth* (1= nonmarital first birth; 0= otherwise). Second, when women with children divorce or become widowed we measure *post marital single parenthood* (1= post marital single parent; 0= otherwise)[1]. Given single mother's relatively precarious economic circumstances, older women who have experienced single parenthood may need to continue working in order to amass sufficient savings for retirement. Further, racial disparities in rates of single parenthood may play a role in the race-retirement relationship.

An individual's current marital status is central to understanding labor force behavior, especially in later life. Unmarried women are economically disadvantaged compared to married women and thus may delay retirement in order to accumulate wealth for later consumption during the retirement years. Also, among married women, it is important to differentiate between women with spouses in the labor force and women with spouses not in the labor force because spouses tend to exit the labor force at around the same time as one another (Henretta and O'Rand, 1983; Henretta, O'Rand and Chan, 1993). Thus, 3 dummy variables are included to capture current marital status: (1) *not*

married (divorced, widowed, and never married), (2) *Married and spouse is in the labor force,* and (3) *Married and spouse is not in the labor force.* Dependent children are also likely to impact labor force participation (Pienta et al., 1994) because children tend to place economic burdens on the household and thus women with a *child under 21* may work longer in order to accrue sufficient savings for retirement and money needed to continue supporting a dependent child. *Number of household residents* may also influence household economic resources and labor force exit behavior.

Measurement of Midlife Work Characteristics

Wages[2] (average salary and or commission per week) are likely to influence labor force exit decisions. Workers with high wages may be less inclined to sacrifice the opportunity cost of forgoing a steady stream of income for retirement. As a proxy for labor market attachment, women's baseline self-report of their average number of *hours worked per week* and *total years ever worked* are included. Women with greater work hours and years worked over the life course may continue to have a stronger labor market attachment into later midlife. On the other hand, women with substantial labor force experience over the life course may have greater economic resources to draw on for retirement. *Occupations* stratify the labor force by allocating different resources, benefits and opportunities to workers. To account for this effect, occupations are divided into white collar, blue collar and service types of occupations. Further, a measure of the baseline *job's physical demands* (1=all/almost of the time; 2=most of the time; 3=some of the time; 4=none/almost none of the time) is included because when comparing work and non-work alternatives, older workers may view high levels of physical demands as a

hurdle to labor force participation, making non-work alternatives more attractive.

Self-employment differs from employment in organizations in many respects (Carr, 1996), which are likely to lead to disparate labor force participation rates. Other work-related factors that are likely to influence labor force behaviors of retirement- aged workers include: *pension eligibility status* (currently receiving or eligible to receive benefits; has pension coverage, but is not currently eligible; and no pension coverage), private pension wealth, and health insurance coverage. Self-reported *pension wealth* (measured as present value as of the interview year) is a summary of promised or received employer-provided pension benefits from as many as three current or prior jobs. *Health insurance* status is measured as: being uninsured; having employer-provided health insurance through one's own employer or a spouse's employer; and having health insurance from another source (i.e. private health insurance, or government provided health insurance).

Measurement of Midlife Economic Well-Being

An individual's income and assets are key indicators of economic well-being. Much like the expected wage effect, we speculate that higher levels of *household income* provide incentives that are likely to encourage one to remain in the labor force. While income is expected to be inversely related to likelihood of retiring, a household's *total non-housing assets* and *net value of primary residence* are likely to be positively associated with retirement. Individuals from households with lower levels of net worth are expected to be more likely than those with more economic wherewithal to remain in

the labor force. The distributions of pension wealth, household income, total non-housing assets, net value of primary residence and net worth are skewed, therefore, these variables are transformed by the natural logarithm in the multivariate models[3,4].

Analytic Strategy

Descriptive statistics are presented for White and Black women (Table 1). Racial differences in descriptive characteristics are calculated using t-test (continuous variables) and chi-square (categorical variables) statistics. Baseline labor force status percentages are presented for (1) the full sample, and (2) by race (Table 2). Next, health profiles of women by baseline labor force status are presented in Table 3. Then, proportional hazard models of women's risk of exiting the labor force due to retirement (Table 4) or work-disability (Table 5) are estimated. A series of nested models are estimated in order to evaluate the direct and indirect effects of race and a wide array of life course variables[5]. Analysis of racial differences in attrition and death (not shown) indicate that Blacks have a somewhat higher risk of death and similar rates of attrition. Diagnostics of collinearity are also run. Respondent-level weights provided by the HRS staff are used to weight all analyses.

RESULTS

Table 1 presents descriptive characteristics for a sample of Black and White women in the labor force in 1992 and reveals important racial differences in life course circumstances, which may affect labor force exit behavior. In particular, compared to White women, Black women are disadvantaged in terms of educational attainment and health, more likely to have been a single parent, less likely to be married or have a spouse

in the labor force, more likely to work in a blue collar job, more likely to be uninsured, and have less household income and non-housing assets.

Table 2 indicates that, overall, 63.3% of women were in the labor force at baseline; 27.9% were retired; and 8.8% of women were work disabled. Black and White women appear to have similar rates of labor force participation. However, further classification of women who have exited the labor force reveals several important racial differences. Whereas Black women are much more likely than White women to report being work disabled (17.4% vs. 3.7%, $p < .01$), they are less likely to be retired (18.2% vs. 30.2%, $p < .01$).

Table 1. Descriptive Characteristics of Women in the Labor Force at Baseline by Race

	White (n=2515)	African American (n=635)	
Sociodemographic and Health Measures			
Age (mean)	55.5	55.4	***
Education (mean)	12.6	12.0	***
Self-Reported Health Status (mean)	2.2	2.8	***
# of Diagnosed Conditions (mean)	1.0	1.2	***
Arthritis (%)	36.8	36.7	
Psychological Problems (%)	6.6	5.8	
High Blood Pressure (%)	27.4	51.2	***
Diabetes (%)	5.5	12.6	***
Cancer (%)	7	4.6	***
Lung Disease (%)	4.8	3.8	**
Heart Problems (%)	6.4	7.1	
Stroke (%)	1.0	1.9	***
Family Circumstances			
Marital Status			
Married w/ spouse in Labor Force (%)	51.9	28.5	***
Married w/ spouse out of Labor Force (%)	16.3	13.4	***
Unmarried (%)	31.8	58.1	***
Kid in HH LT 21 yrs old	15.9	21.9	***
# HH Residents	2.4	2.8	***
Nonmarital First Birth (%)	8.6	25.7	***
Post Marriage Single Parenthood (%)	30.4	40.2	***
Job Characteristics and Work History			
Wage/ Week (mean)	$441.20	$369.14	***
Work Hours/ Week (mean)	37.0	35.9	**
Pension Wealth (median)	$ 33,747.00	$ 42,288.00	**
Years Employed Over Life Course (Mean)	26.2	27.3	**

Table 1 (continued).

	White (n=2515)	African American (n=635)	
Occupation (%)			
White collar	29.6	20.3	***
Blue collar	19.4	30.8	***
Service sector	51.0	48.9	
Self employed (%)	14.6	7.3	***
Pension Status (%)			
Covered by a pension	47.1	47.1	
Eligible for Pension	11.2	13.1	
No pension	41.7	39.8	
Health Insurance Status (%)			
Employer health insurance	75.9	71.7	***
Other health insurance	10.0	10.3	
No health insurance	14.1	18.0	***
Economic Well Being			
Net Value of Primary Res. (median)	$50,000.00	$22,000.00	***
Non-Housing Assets (Median)	$46,580.00	$6,000.00	***
HH Income (median)	$39,000.00	$24,000.00	***

*p<.10; **p<.05; ***p<.01.
Note - T-test (continuous variables) and chi-square (categorical variables) statistics are used to compare descriptive statistics across the two samples.

Table 2. Baseline Labor Force Status by Race

Labor Force Status	Total	Whites (%)	African Americans (%)
ILF	63.3	63.0	64.4
Work-Disabled ***	8.8	3.7	17.4
Retired ***	27.9	30.3	18.2

*p<.05; **p<.01; ***p<.001

Results presented in Table 3 indicate that health profiles of women vary by baseline labor force status. Women in the labor force have the best health (e.g. they have the lowest prevalence of hypertension, diabetes, cancer, lung disease, heart problems, strokes, arthritis and psychological problems, and they have the highest self-rated health), followed by retired women. As expected, women who report being work disabled have the poorest health profiles. Since analyses of labor force exits will draw solely upon women in the labor force at baseline, it is worth noting the presence of a healthy-worker selection bias.

Table 3. Measures of Physical and Self-Rated Health by Baseline Labor Force Status

	ILF	Retired	Work-Disabled
# of Diagnosed Conditions (mean) a***, b***, c***	1.0	1.3	2.6
Self-Rated Health (mean) a***, b***, c***	2.3	2.7	4.3
High Blood Pressure (%) a***, b***, c***	29.6	35.8	51.4
Diabetes (%) a***, b***, c***	6.2	9.8	21.5
Cancer (%) a*, b***, c***	6.5	7.2	12.0
Lung Disease (%) a**, b***, c***	4.6	5.2	20.6
Heart Problems (%) a***, b***, c***	6.1	8.6	30.2
Stroke (%) a***, b***, c***	1.1	1.8	9.6
Arthritis (%) a***, b***, c***	36.4	42.0	70.5
Psychological Problems (%) a***, b***, c***	6.3	11.7	38.7

*p<.10; **p<.05; ***p<.01

a Denotes statistically significant different mean values between individuals ILF and Retired

b Denotes statistically significant different mean values between individuals ILF and Work Disabled

c Denotes statistically significant different mean values between work-disabled and retired individuals

Nested model strategy

Tables 4 and 5 present results from the multivariate proportional hazard models of the impact of race on rates of retirement or exiting the labor force due to a disability,

respectively. Both tables employ a nested model strategy in order to explore how life course factors may intervene in the race-labor force behavior relationship. Model 1 includes measures of race and age at baseline. Model 2 adds covariates to estimate the effects of time and education. Model 3, the base model, adds measures of baseline health in order to estimate the effects of physical and subjective health on labor force exit behavior, and to explore whether health intervenes in the race-labor force behavior exit relationship. Model 4 adds measures of work characteristics to the base model in order to explore the impact of work variables on retirement and their role in the race-retirement relationship. Model 5 adds measures of prior single parenthood experiences to the base model in order to explore whether earlier family circumstances impact subsequent labor force behaviors and their role in the race-retirement relationship. Single parenting and current family circumstances are added to the base model in order to explore the direct effects of family characteristics, as well as the direct and indirect effects of earlier single parenting circumstances and race on labor force exit behavior (Model 6). Next, economic measures are added to the base model (Model 7). Model 8 is the fully specified model.

Retirement behavior among Black and White women

Risk ratios of retirement presented in Table 4 indicate that Blacks are less likely than Whites to retire (Models 1-4). As hypothesized, familial and economic factors over the life course intervene in the race-retirement relationship. For instance, controlling for prior single parenting circumstances (Model 5) and current family circumstances (Model 6) eliminates racial disparities in retirement. Similarly, once measures of economic security are included in the model, Black and White women appear to have similar rates of retirement (Model 7).

Table 4. Risk Ratios from Proportional Hazard Models of Retirement

	MODEL 1	MODEL 2	MODEL 3	MODEL 4	MODEL 5	MODEL 6	MODEL 7	MODEL 8
VARIABLES								
African American	.89**	.88**	.87**	.86**	.90	1.04	1.01	1.09
Age	1.16***	.99	.99	.95***	.98	.98*	.98	.94***
Time		1.18***	1.18***	1.23***	1.18***	1.18***	1.18***	1.23***
Education		1.0	1.0	.98**	1.0	.99	.98**	.97***
HEALTH MEASURES								
Number of Diagnosed Conditions			1.02	1.03	1.03	1.03	1.03	1.04*
Self-Rated Health			1.02	1.04	1.02	1.03	1.04*	1.06**
WORK CHARACTERISTICS								
Wage / Week				1.0				1.0
Hours / Week				.99***				.99***
Log of Pension Wealth				1.02***				1.02***
Years Worked Over Life Course				.99***				.99***
Occupation								
Blue collar				1.11				1.12
Service				1.01				1.0
White Collar				d				d
Self employed				1.27***				1.19**
Pension Status								

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Table 4 (continued).

	MODEL 1	MODEL 2	MODEL 3	MODEL 4	MODEL 5	MODEL 6	MODEL 7	MODEL 8
Covered by pension				1.11**				1.12**
Eligible for pension				1.22***				1.23***
No pension				d				d
Health Insurance Coverage								
Uninsured				.91				.99
Other Health insurance				1.0				1.04
Employer-provided				d				d
FAMILY CIRCUMSTANCES								
Post Marital Single Parenthood					.80***	.92*		.95
Non-marital 1st Birth					.91	.87**		.89
Current Marital Status								
Unmarried						.74***		.74***
Married (Spouse in Labor Force)						1.17***		1.05
Married (Spouse Not in Labor Force)						d		d
Child under 21						.91		.89*
Number of HH Residents						.93***		.93***
ECONOMIC WELL-BEING								
Log of HH Income							1.01	.98
Log of Non-housing Assets							1.04***	1.03***

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Table 4 (continued).

	MODEL 1	MODEL 2	MODEL 3	MODEL 4	MODEL 5	MODEL 6	MODEL 7	MODEL 8
Log of Net Value of Primary Residence							1.02***	1.01**
Intercept	9.830	10.640	10.88	10.37	10.46	10.22	10.93	9.85
Model X2	-6718.62	-6542.44	-6541.03	-4964.09	-6525.19	-6480.21	-6505.34	-4910.81
D.F.	2	4	6	13	8	12	9	26

*p<.10; **p<.05; ***p<.01.
d Denotes reference group

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Analyses presented in Table 4 reveal a number of other important predictors of retirement behavior. Whereas women that are older, self-employed, and have greater pension wealth, non-housing assets, and net value of primary residence are more likely to retire, women with greater work hours per week, greater work tenure over the life course, greater number of household residents, and ever single mothers are less likely to retire. Also, women who are eligible to receive their pension are more likely than women without a pension to retire. Controlling for current marital status indicates that compared to married women with a spouse outside the labor force, unmarried women are less likely to retire, and married women with a spouse in the labor force are more likely to retire. Also, part of the single parent effect is mediated by current marital status.

Work disability among Black and White women

Table 5 presents the relative risk ratios of exiting the labor force as a result of a work disability. As hypothesized, Black women have a significantly higher risk than White women of reporting an exit from the labor force due to a disability (RR=2.03, $p< .01$) (Model 1). Controlling for educational attainment (Model 2), results in a modest reduction in Black's excess risk (RR= 1.74, $p< .01$). Adding baseline measures of health (Model 3) reveals several important findings: (1) women with a greater number of health conditions and poorer self-rated health are more likely to subsequently report exiting the labor force due to disability, (2) Black women's excess risk or work disability is substantially reduced (RR= 1.74, $p< .01$ to RR=1.28, $p< .05$), and (3) education's effect size is somewhat reduced (RR= .84, $p< .01$ to RR= .90, $p< .01$)—indicating that education's effect on rates of work disability partially operate via health measures. These findings lend support to the notion that Black women's excess risk of work disability is partially a function of their poorer health, as well as the idea

Table 5. Risk Ratios from Proportional Hazard Models of Work Disability

	MODEL 1	MODEL 2	MODEL 3	MODEL 4	MODEL 5	MODEL 6	MODEL 7	MODEL 8
VARIABLES								
African American	2.03***	1.74***	1.28**	1.44***	1.21	1.16	1.06	1.28*
Age	.97**	.90***	.89***	.84***	.89***	.89***	.89***	.84***
Time		1.06***	1.06***	1.13***	1.06***	1.06***	1.06***	1.13***
Education		.84***	.90***	.93***	.90***	.99**	.93***	.94***
HEALTH MEASURES								
Number of Diagnosed Conditions, W1			1.18***	1.19***	1.16***	1.15***	1.15***	1.14***
Self-Rated Health, W1			1.85***	1.86***	1.83***	1.82***	1.77***	1.80***
WORK CHARACTERISTICS								
Wage / Week				1.0				.99
Hours / Week				1.01*				1.01**
Log of Pension Wealth				.98				.99
Years Worked Over Life Course				.98***				.98***
Occupation								
Blue collar				1.08				1.10
Service				.99				.99
White Collar				d				d
Self employed				.51***				.54**
Pension Status								
Covered by pension				1.19				1.22

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Table 5 (continued).

	MODEL 1	MODEL 2	MODEL 3	MODEL 4	MODEL 5	MODEL 6	MODEL 7	MODEL 8
Eligible for pension				1.45*				1.51**
No pension				d				d
Health Insurance Coverage								
Uninsured				1.28*				1.17
Other Health insurance				1.94***				1.72***
Employer-provided				d				d
FAMILY CIRCUMSTANCES								
Post Marital Single Parenthood					1.35***	1.20*		1.20
Non-marital 1st Birth					1.23*	1.25*		1.17
Current Marital Status								
Unmarried						.99		.68**
Married (Spouse in Labor Force)						.69***		.67***
Married (Spouse Not in Labor Force)						d		d
Child under 21						1.25*		1.47***
Number of HH Residents						.93*		.90**
ECONOMIC WELL-BEING								
Log of HH Income							.95***	.95
Log of Non-housing Assets							.97***	.97**
Log of Net Value of Primary Residence							.98**	.99

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Table 5 (continued).

	MODEL 1	MODEL 2	MODEL 3	MODEL 4	MODEL 5	MODEL 6	MODEL 7	MODEL 8
Intercept	1.14	1.09	.74	1.59	1.03	.55	.17	.70
Model X2	-1993.54	-1953.42	-1821.17	-1435.67	-1814.35	-1804.83	-1804.95	-1415.46
D.F.	2	4	6	13	8	12	9	26

*p<.10; **p<.05; ***p<.01.
d Denotes reference group

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that racial disparities in educational attainment, in part, underlie racial differences in both health and labor force exit behavior in later life.

Racial disparities in family patterns and wealth also underlie racial disparities in rates of work disability. Once either measures of family circumstances (Model 6) or economic well being (Model 7) are controlled for, Black and White women appear to have similar rates of work disability. It is important to note that measures of work, family, and economic circumstances also impact rates of work disability. Women with more years of employment throughout the life course are less likely to become work disabled, and compared to married women with a spouse outside the labor force, married women with a spouse in the labor force have a lower risk of becoming work disabled. Also, self-employment, older age, and higher values of household income, non-housing assets and net value of primary residence are associated with lower risks of work-disability.

DISCUSSION

A recent study by Katherine Newman documents how the processes of cumulative advantage and disadvantage result in dramatic aged heterogeneity:

> Education, employment, and earnings are key 'social facts' that shape the conditions under which these generations reached their middle-age and elderly years. Race, Gender, region, and family history interact to set the stage for development of each individual's portfolio of resources-financial and personal-which constitute the 'bank account' from which to draw in the later years. For some, this means a comfortable cushion of savings, pensions, equity in housing…For others, growing old means growing poorer, because a lifetime of economic marginality means there are no savings (2003; p.43)

Newman's research shows that the advantages associated with being White, instead of Black, accumulate over the life course and result in very different aging experiences for White and Black women. Similarly, findings from this study suggest that by late midlife,

Black women are at a significant disadvantage, compared to White women, in terms of educational attainment, work and family histories, income, wealth, and health, and that these racial disparities result in race differences in women's labor force exit patterns. Specifically, Black women are less likely than White women to retire and are more likely to report exiting the labor due to a disability.

This study makes several contributions to the literature related to race and labor force behavior among women in midlife. First, this study investigates race differences in labor force exit patterns among a broad cross-section of women aged 51-61 in 1992[6]. Further, the use of the HRS data allows for the examination of the roles of a wide array of life course factors such as education, work and family circumstances, wealth, and health in the race-labor force exit behavior relationship.

Second, this study extends previous research on labor force exit patterns of women in general, and race differences in particular, by distinguishing between different routes out of the labor force (e.g. retirement and work-disability) rather than relying on labor force participation rates. For instance, preliminary analysis reveals that whereas labor force participation rates for Black and White women aged 51 to 61 were almost identical in 1992 (64.4% vs. 63.0%), Blacks were nearly 5 times as likely as Whites to be work-disabled (17.4% vs. 3.7%), and were substantially less likely to report being retired (18.2% vs. 30.3%). Thus, attention to alternative routes out of the labor force reveals dramatic race differences in labor force exit patterns that are masked by relying on labor force participation rates.

Third, this study is among the first to explore race differences in women's labor force exit patterns through the use of hazard models and panel data. This approach offers

a number of advantages over the use of static models of labor force patterns used in previous research. For example, whereas static models of labor force patterns are unable to establish a causal relationship between health and labor force patterns because it is equally plausible that both health could affect labor force patterns and that labor force patterns could affect one's health, this study's use of lagged measures of health within the context of hazard models is capable of providing strong evidence of a causal role of health in the work-disablement process.

Although race differences in health account for a substantial portion of the race gap in work disability, residual racial disparities in work disability remain. One reason that the health disparities may not completely account for the race gap in work-disability may have to do with systematic measurement errors. For example, Blacks may be more likely than Whites to under-report health conditions. Compared to White women, Black women have far fewer economic resources, are more likely to be uninsured, and are less likely to have employer provided insurance. Consequently Blacks are more likely to receive infrequent and inadequate health care. Black's lower rates of contact with health care providers may significantly mask unrecognized health problems, and thus understate the full mediating effect of doctor-diagnosed conditions in the race-work disability relationship. Thus, race residuals ought to be interpreted with caution.

Although the focus of this paper has been on the role of individual- and household-level predictors of retirement behavior, macro-level factors as well as human agency are also likely to play an important role. Indeed, recent research suggests that structures and policies of the state shape the retirement behavior of individuals (McDonald, 1996; McMullin and Marshall, 1999; Moen, 2003). Similarly, the preceding

discussion on the cumulative disadvantages associated with being born Black should not be construed as implying that the risks of retirement and work disability are fully determined by one's social location. A study by McMullin and Marshall (1999) shows that workers make choices and employ strategies aimed at maximizing savings and investments for retirement in the face of barriers that constrain them financially. The emphasis on predictors of labor force exit behavior is merely meant to underscore the notion that the decisions and circumstances surrounding Black and White women's labor force exit behavior are, in many ways, shaped by their social location.

The projected increasing old-age dependency ratio has sparked a great deal of concern and speculation surrounding issues of pertaining to the solvency of the Social Security System. Rix (2003), however, cautions against "apocalyptic demography" as she notes that the older work force in 2006 will actually represent a smaller proportion of the labor force than it did in 1966. She has also outlined a number of potential policy interventions aimed at increasing labor force participation among the elderly in an effort to maintain the solvency of the U.S. Social Security System such as 1) increasing the age of eligibility of Social Security retirement benefits, 2) phasing retirement, 3) eliminating the penalty on defined-benefit pension plans for continuing to work in later-life, and 4) eliminating Social Security taxes for older workers. Rix (2003) also points out, however, that there are a number of drawbacks associated with such policies including their potential for disparate impact on the work lives of women, minorities, the poor, and individuals in ill-health. Thus, future policies with an eye toward increasing the labor force participation among the elderly ought to fully consider the possibility of such unintended consequences.

As noted above, retirement is a particularly difficult concept to measure. The difficulties associated with measuring labor force behavior reflect the complexities of contemporary labor force patterns of adults in the U.S. Future research is needed on these complex labor force patterns, including transitions back into the labor force, as well as whether findings from this study are similar for different age strata and birth cohorts. That being said, this study represents an early and important step in identifying race differences in labor force exit pathways among women –and their sources—and, more broadly, it demonstrates how a wide array of factors across the life course are related to circumstances and decisions in the later years.

Endnotes

1 It is important to note that the measures of earlier single parenting experiences are measured with the aid of retrospective information on marital and fertility histories. Thus, some respondents may misreport the exact timing of event, however, marriages, births, and divorces are likely rather salient and memorable experiences for the respondents, and the random bias introduced by some misreporting is not expected to significantly affect the results presented.

2 In the event that a respondent has more than one job, measures of work characteristics refer to their current primary job (except the pension wealth measure).

3 A relatively small number of respondents have negative values for some of the economic measures. Respondents with negative values are assigned a value of .01 before the natural logarithm is taken.

4 A significant number of respondents are missing information on these measures of economic well-being. Item response rates for some of these measures such as pension wealth and total household wealth are likely to be low due to the respondents' lack of knowledge. Responses for these measures may also be inaccurate for similar reasons. These forms of missing and inaccurate data are likely to introduce random bias into the models, however, such bias is not expected to significantly alter the results presented here.

Much of the missing data is also likely related to privacy issues. Since respondents with higher levels of income and wealth may be less likely than those with less income to answer these questions due to privacy concern, this may introduce systematic bias, however, empirical results suggest that these measures remain significant predictors of labor force exit behavior and they explain part of relationship between race and labor force exit behavior (see Tables 4 and 5).

5 Only respondents with complete and useful answers for both dependent and independent measures were included in the analyses. To the extent that item non-responses are systematic, results presented here may not be representative of women aged 51-61 in the labor force in 1992.

6 Due to unit and item non-response bias, the analytic sample may not be completely representative of all women in the U.S. aged 51-61 in 1992. The extent to which the analytic sample differs from the target population—English-speaking, non-institutionalized women aged 51-61 in 1992—and how such bias affects the findings presented here is unclear. Future research may be useful to for verifying these findings.

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