Original Article

Social Currents
2021, Vol. 0(0) 1–25

DOI: 10.1177/23294965211053835
journals.sagepub.com/home/scu
SAGE

The Intersecting Consequences of Race-Gender Health Disparities on Workforce Engagement for Older Workers: An Examination of Physical and Mental Health

Kendra Jason[1] and Christy L. Erving[2]

Abstract

The dramatic growth of older adults' labor participation over the past 25 years, including women and people of color, is reshaping the American labor force. The current study contributes new knowledge concerning why individuals over age 50 years may be working longer despite negative impacts of deteriorating physical and mental health associated with aging. Inquiries regarding who continues to work and why can be answered, in part, by addressing how workforce engagement and health are shaped by notable social inequities along the dimensions of age, race, and gender. Guided by cumulative advantage/disadvantage and intersectionality frameworks, we examine whether having multiple chronic conditions (MCC)—two or more physical conditions—and depression affect workforce participation. Using multinomial logistic regression models, we analyze the 2014–2016 waves of the Health and Retirement Study (N = 4250). Findings reveal that having multiple chronic illnesses increase the likelihood of labor force exit, especially among workers who also have depression. We also discover intersectional nuances which illuminate complex race-gender dynamics related to health and work processes in later life. We conclude with recommendations for workplace policy that promote the retention of older workers with chronic illness and depression and aim to decrease disparities in older workers' work engagement.

Keywords

organizations, occupations, and work, race, gender, and class, labor health disparities aging and the life course

Introduction

Employment trends have drastically shifted over the past several decades, affecting workers' job security, benefits, income, and accessibility to retirement and disability employment benefits (Kalleberg 2011; Wegman

[1]Department of Sociology, University of North Carolina at Charlotte, Charlotte, NC, USA
[2]Department of Sociology, Vanderbilt University, Nashville, TN, USA

Corresponding Author:
Kendra Jason, Department of Sociology, University of North Carolina at Charlotte, 9201 University City Blvd, Charlotte, NC 28223, USA.
Email: kjason@uncc.edu

and McGee 2004). When it comes to studying changing work arrangements, the focus is often on young workers (Chancer, Sánchez-Jankowski and Trost 2018; Kalleberg 2018); however, older workers, specifically those over the age of 65 years, had the largest increase in labor market participation relative to all the other age groups over the 2002–2012 decade (Toossi 2013). In order to more fully comprehend employment trends and the inherent inequality within the labor market, sociologists must not neglect the "silver tsunami" of older workers in the American workforce (see Calasanti 2020).

Employment after retirement age has increased over 100% in the last 10 years. In 2002, workforce participation by all adults aged 55+ years was 34% and increased to 40% in 2012; participation rates for the age group 55–64 years stood at 64% in 2012 and is expected to increase by 68% by 2022 (Toossi 2013). However, about one-third of those aged 45–64 years, and up to 75% of all older adults have multiple chronic conditions (MCC)—co-occurrence of two or more physical chronic diseases (i.e., high blood pressure, cancer, lung disease, heart disease/condition, stroke, diabetes, or arthritis) (Ralph et al. 2013; Thomeer 2016). An estimated 15% of older adults experience clinically significant depressive symptoms; furthermore, co-occurring physical and mental health problems are alarmingly high among older adults, with one study reporting a physical-mental comorbidity prevalence of 20% (Wang and Kim 2019). Despite the physical and mental health problems older adults endure, longer life expectancies and ongoing changes in Social Security and retirement plans for Baby Boomers encourage continued workforce participation among older adults (Toossi and Torpey 2017). Hence, as the population grows older and sicker, employment for older workers continues to surge.

Research has documented the negative impacts of physical health problems on disability and retirement, but there is a paucity of studies that examine the influence of physical *and* mental health problems—and fewer that analyze race and gender differences. Extant research makes the implicit assumption that health problems affect the workforce engagement of older workers similarly across social status. Consequently, we have little insight on the relationships between MCC, depression, and workforce participation in the context of growing racial and gender inequality. Accordingly, we focus on gender and race differences in the effect of health on workforce engagement, as health (Williams 2012; Williams, Priest, and Anderson 2016) and work disparities (Tomaskovic-Devey et al. 2006; Western and Petit 2005) are longstanding.

The relationship between health and labor market dynamics is well documented (Sánchez-Moreno et al. 2016). However, most studies that examine the relationship between health and employment status focus on employment versus unemployment or full-time versus part-time dichotomies. This paper moves beyond these dichotomies and measures workforce participation by substantial changes in the number of hours worked (Jason et al. 2017), which captures nuanced, yet meaningful, transitions in workforce engagement between workers by recognizing the compounding and disparate effects of race, gender, physical health, and mental health intersections in the U.S. workforce that encourage labor market exit.

Background

The Physical Health-Mental Health-Work Nexus

Poor health is associated with early retirement (Van Rijn et al. 2014), decreased work productivity (Tunceli et al. 2005), and labor force exit (Jason et al. 2017). However, one specific health problem is often the health outcome of interest (e.g., diabetes). Other research examining comorbidities, however, find similar results. For instance, Jason et al. 2017 reported that MCC was associated with increased probability of transitioning out of the workforce. Prior research shows that having MCC increases work disability (Lerner, Allaire, and Reisine 2005) and decreases work ability (Boyd and Fortin 2010; Koolhaas et al. 2013).

Although physical health plays a significant role in the consideration of labor force

participation, individuals must contemplate both their physical and mental capacity to engage in the workforce (Emptage, Sturm, and Robinson 2005; von Korff 2009). Depression, in particular, is associated with morbidity, limited functioning (Whiteford et al. 2013), decreased work performance (Wang et al. 2004), as well as, increased work impairment, disability, and absence (Greenberg et al. 2003; Stewart et al. 2003). Depression and depressive symptoms are also associated with retirement for middle-aged workers (Luo et al. 2010; Segel-Karpas, Ayalon, and Lachman 2018). Chronic physical disease onset is associated with elevated depressive symptoms among older adults (Hollingshaus and Utz 2013; Wilson-Genderson, Heid, and Pruchno 2017). Accordingly, depression is likely an emotional response to the stress of managing multiple chronic health problems (Wilson-Genderson, Heid, and Pruchno 2017). Given the known linkage between physical and psychological health (Erving and Frazier 2021; Wilson-Genderson et al. 2017), MCC and depression comorbidity prevalence could be quite common even among older adults who remain engaged in the workforce.

Few studies examine how co-occurring physical and psychological health problems influence workforce engagement. One study found that individuals with co-occurring physical conditions and mental disorders had higher unemployment rates relative to those with physical only or mental only health problems (von Korff 2009). We build on this work by examining a different measure of workforce engagement (i.e., transitions in hours working) and health (i.e., MCC and depression), as individuals with health problems may remain in the workforce but reduce their work hours. We propose that co-occurring MCC with depression will be associated with decreased labor force engagement, above and beyond having MCC without depression. Here, we use cumulative advantage/disadvantage (CAD) and intersectionality frameworks to build on prior work assessing the association between MCC and work by examining whether depression in tandem with MCC exerts an additional negative influence on the workforce engagement of older workers.

Cumulative (Dis)advantage and Intersectionality Frameworks

Cumulative advantage/disadvantage (CAD) theory accounts for the accumulation of risk factors over the life course. Social scientists have advocated for structural explanations of inequality to understand the consequences of socio-environmental risks that produce long-term consequences in life chances, well-being, and workforce engagement (Brown et al. 2016). Life course inequalities contribute to health and work outcomes in later life (George 2003; Ferraro and Kelley-Moore 2003; Brown et al. 2016) as aging patterns are shaped by social conditions and social change (Dannefer 2003).

A CAD perspective allows for a more comprehensive understanding of how race and gender influences workforce participation and decision-making in mid-to-late life. In their discussion of frameworks that capture the experiences of older minority workers, Choi, Tang, and Carr Copelend (2017) challenge theories such as role theory and activity theory, both of which are based in the assumption that working after retirement age is attributable to personal preferences. We agree, as research has shown that financial strain, especially for Black women and men, is a structural driving force motivating working more hours and/or remaining in the workforce for a longer period of time (Cahill et al. 2006; Gustman and Steinmeier 2009). Black–white differences in work behaviors are also driven and differentiated by lifetime histories of poor health (e.g., disability and morbidity), poverty, discrimination, and precarious work histories (Choi, Tang, and Carr Copelend 2017). CAD theory posits that these disadvantages do not suddenly occur in old age, but rather are the result of long-term cumulative advantages and disadvantages in early life; furthermore, accumulated disadvantage has far-reaching effects such that pre-retirement inequality persists even after retirement. The fundamental assumptions in CAD theory allow for a serious consideration of how race and gender pattern health, finances, discrimination, and career/job stability—factors that matter for later life work engagement decisions.

A CAD lens prioritizes a consideration of how workforce engagement is influenced by racial inequality in occupation type and socioeconomic status. National data revealed that over 50% of older Black workers, yet only 32% of older white workers, described their jobs as requiring "lots of physical effort"; Black workers were also less likely to have the ability to transition to a less demanding job with their current employer (Moore, Ghilarducci, and Webb 2019). This is meaningful, as employer-provided health insurance is the predominate source of insurance in the United States: approximately 75% of full-time workers aged 18–64 years have employer-provided health insurance—promoting "job lock"—a situation where workers are reluctant to leave a job for fear of losing or delaying health coverage, disruption in healthcare provision, or losing earned credit toward plan deductibles and unused balances in health reimbursement accounts (Fairlie, Kapur, and Gates 2016). In sum, the combination of occupation type, socioeconomic status, and health insurance needs play critical roles in understanding social status differences in workforce behavior.

The intersectionality framework acknowledges the "structural roots of experiences of marginalization" (Ferraro, Kemp and Williams 2017: 11) by focusing on the interlocking systems of oppression and domination that shape and structure peoples' lives (Collins 2000; Crenshaw 1991). Intersectionality helps explain how experiences in the labor market are situated within larger systems of oppression (e.g., racism, ageism, and classism) by connecting individual-level subjective experiences (micro) to social structures (macro), thus illuminating how processes of differentiation shape lived experience. Intersectionality also emphasizes how individuals are simultaneously multiply burdened as they navigate multiple identities and structural positions. This is crucial for this study as aging is experienced differently across social groups due to the systems of oppression in which life course processes are entrenched.

CAD and intersectionality affirm that work is unequally distributed by social status. In the private sector, for example, since the passing of the Civil Rights Act in 1964, white men have moved into more managerial positions, while progress for Black men and women stalled after the 1980s (Stainback and Tomaskovic-Devey 2012). Differential returns in education and training persists as the relationship between education and insecure work is race- and gender-contingent: white men are less likely to engage in precarious work; when they do, however, they earn more than white women, Black men, and Black women (Branch and Hanley 2017; Stainback and Tomaskovic-Devey 2012).

The necessity of Black women's participation in the workforce is interlocked with restricted education and work opportunities for Black men. Both white and Black women endure the burden of unpaid labor, but white women gain wealth and spousal benefits (including spousal death benefits) through marriage—an advantage that Black women are significantly less likely to experience (Hogan and Perrucci 2007). Using the Health and Retirement Study (HRS), Hogan and Perrucci (2007) found white and Black women are less likely than men to retire; however, Black women continue to work longer than white women because white women receive more Social Security, pension, and asset income than comparable white men. Brown and Warner (2008) found Black women are less likely to retire, although they are often forced out of work due to disability as result of cumulative disadvantages over the life course and labor market disadvantage. Hence, Black women share the experience of limited employment opportunities with Black men, and the exploitation of unpaid domestic labor with white women. Even when highly educated, Black women suffer from sexism, underpayment (even in "good" jobs), and exclusion from access to white men's higher salaries (Hogan and Perrucci 2007). Unequivocally, racism and sexism underscore race-gender employment trends and undergird race-gender health disparities and work-related decision-making.

The Intersecting Consequences of Race-Gender on Health Inequality

Race and gender health disparities are well documented in the literature. Specifically, Black

Americans experience higher rates of diabetes, hypertension, asthma, arthritis, and obesity compared to their white counterparts (Bodenheimer, Chen, and Bennett 2009). In mid-to-late life, Black adults also report higher depressive symptoms relative to white adults (Abrams and Mehta 2019; Rodriquez et al. 2017). With regards to gender, women have higher MCC and depression rates than men (Rosenfield and Mouzon 2013; Ward and Schiller 2013); and women have higher rates of co-occurring physical and mental health problems (Gureje and Oladeji 2009).

Health scholarship is increasingly incorporating the intersectionality framework theoretically and methodologically (e.g., Bauer and Schiem 2019; Schulz and Mullings 2006; Brown et al. 2016),[1] revealing consistent evidence of a white male advantage and Black female disadvantage for various health outcomes (Brown and Hargrove 2013; Schulz and Mullings 2006; Warner and Brown 2011). For instance, Brown and Hargrove (2013) found that Black–white differences in functional limitations (a measure of disability) were larger for women than men (see Koroukian et al. 2016 for argument that functional limitations, rather than chronic illness, drive health outcomes). Black women report more chronic physical health problems vis-à-vis their white male, white female, and Black male peers (Umberson et al. 2014). In contrast to the broader literature on race and mental health, Black women also report higher depressive symptoms than white women in later life (Spence et al. 2011). Accordingly, Black women's consistent health disadvantage is, in part, attributable to the multiplicative effects of co-occurring dimensions of inequity they face (e.g., racism and sexism, often in combination with classism) in their everyday lived experiences that, in turn, influence their life chances (Collins and Bilge 2020; Hinze, Lin, and Andersson 2012).

We extend health intersectional scholarship in three ways. First, our analysis will reveal whether race-gender patterns of comorbid MCC and depression among older workers reflect the Black female disadvantage and white male advantage found in much of the extant literature. Second, we center Black women in our analysis: selecting Black women as the reference category is a small, yet powerful, methodological decision which aligns with intersectionality's initial focus on the unique disadvantages Black women face with regards to both racism and sexism (Aguayo-Romero 2021; Crenshaw 1989; 1991). Third, we apply an intersectional perspective to not only race-gender health patterns, but how health, in turn, influences labor force engagement.

The Consequences of Race and Gender Health Disparities for the Ability to Work

Research examining the effect of health status on workforce engagement has generally not taken an intersectional approach. Nevertheless, this work demonstrates gender nuances in the association between physical/mental health and workforce engagement (McDonough and Amick 2001). For example, Koford and Cseh (2015) showed that depression was associated with reduced work hours for women, but not men. Another study, however, found similar gendered patterns when examining the impact of prior anxiety and depression on early labor force exit (Rudolph and Eaton 2016). The current study brings clarity to this work by taking into consideration gender *and* race in understanding the health-workforce engagement linkage.

Together, CAD and intersectionality frameworks emphasize individuals' access to resources (e.g., disposable income, wealth, and quality healthcare) and help explain life outcomes of those who experience discriminatory treatment—another contributor to health disparities. Rooted in societal-level racism and sexism, perceived racial and gender discrimination adversely affect health (Cobb, Parker, and Thorpe 2020; Lewis, Cogburn, and Williams 2015; Williams, Neighbors, and Jackson 2003). Discrimination experiences occur in tandem with life course disadvantage and, over time, influence health and work behavior (Chae et al. 2014). Those facing ongoing chronic discrimination are disproportionately burdened by MCC and face greater challenges with respect to continuous employment (Shadmi 2013; Ward and Schiller 2013). Given that Black women

and men experience greater exposure to discrimination relative to their white counterparts, there is a possibility that they will also be the most likely to experience MCC and depression, which, in turn, will negatively impact workforce engagement.

Alternatively, despite experiencing health problems, socially disadvantaged groups most susceptible to discrimination might be the most likely to remain in the workforce out of economic necessity (Belgrave et al. 1987). Nuances between Black and white men's workforce behavior are illustrative. McDonough and Amick (2001) found that relative to white men, Black men are less able to exit the labor force when they report poor health. Low-wage and lower-educated workers are disproportionally Black, and Black men are further clustered in physically demanding jobs that are incompatible with carrying out work responsibilities while managing multiple chronic illnesses; nevertheless, Black men are typically unable to reduce hours or discontinue working without losing access to health insurance and financial support (LaVeist 2005). Approximately 50% of white men are in white collar, less physically laborious jobs; even as they experience debilitating health issues, they have more financial supports to reduce work hours or exit the labor force altogether (Berecki-Gisolf et al. 2008). In comparison to Black men, white men are more likely to be married to white women who take on a caregiving role should they become ill (Berecki-Gisolf et al. 2008). These dynamics of accumulated disadvantage for Black men older workers suggest that white men may be more likely to reduce hours or exit the labor force when they experience health problems.

White women are more likely to be financially supported by a working spouse (Berecki-Gisolf et al. 2008), even if their own ability to work is negatively impacted by health problems. Marriage rates for mid-to-late life Black women (37%) are significantly lower compared to white women (72%) (Addo and Lichter 2013), leaving Black women with more precarious financial safety nets which necessitate longer workforce engagement for Black women even when they are seriously ill. Due to disparities in earnings, marriage, and financial support, Black women may be less likely to exit the labor force when they experience MCC and depression compared to their white female counterparts. In summary, an array of contextual factors may affect whether particular race-gender groups remain in the workforce when they face MCC and are also psychologically compromised by depression.

The Current Study

Previous research lacks a comprehensive assessment of how physical and mental health status has differential workforce engagement implications by race and gender. We extend prior research by: (1) Exploring how having MCC—as opposed to a single health problem—affects workforce engagement for older workers; (2) Assessing how co-occurring depression and MCC impact workforce engagement compared to MCC without depression; (3) Analyzing longitudinal data, thereby contributing methodological rigor to the primarily cross-sectional research on this topic, and (4) Interrogating how race and gender condition the association between MCC with depression and workforce engagement. This study is guided by two research questions:

1. Among older workers, does co-occurring MCC and depression have a relatively larger negative impact on workforce engagement than MCC without depression?
2. Does the association between MCC, in isolation or in combination with depression, and workforce engagement differ for Black women, Black men, white women, and white men?

Methods

Research Design and Data

We used the Health and Retirement Study (HRS) data, a nationally representative longitudinal study surveying U.S. adults over the age of 50 every 2 years since 1992. The analysis was constrained to individuals who were actively in the labor force in 2014. Here, we examined work transitions between 2014 and 2016.[2]

Black and Hispanic adults were oversampled, and institutionalized persons were excluded. Analyses were based on 4250 older adult workers (617 Black women, 395 Black men, 1687 white women, and 1551 white men).

Measures

The dependent measure, *workforce engagement*, was calculated using respondents' reported number of hours worked in a typical week for both the respondents' first and, if applicable, second job in 2014 and 2016. We top-coded the number of work hours at 60 hours as only 5% of respondents reported working more than 60 hours. We then calculated the difference in workforce hours from 2014 to 2016. We use a five-hour buffer to assess substantive and meaningful changes in workforce engagement. Following past research (Jason et al. 2017), this change in workforce behavior was coded as four mutually exclusive categories: (1) stopped working (reference category), (2) worked fewer hours, (3) worked the same hours, and (4) worked more hours.

Our key independent measure, *health status*, captured chronic physical conditions and depression. For chronic physical conditions, respondents were asked if a doctor ever told them that they had arthritis, high blood pressure, diabetes, cancer, lung disease, stroke, and heart disease.[3] Individuals with a diagnosis of two or more physical health problems were operationalized as having MCC (Erving and Frazier 2021; Ward and Schiller 2013). In terms of depression, the Center for Epidemiological Studies-Depression (CES-D) depressive symptoms scale included items which asked respondents whether they experienced (yes/no) the following much of the time in the past week: depressed, that everything was an effort, had restless sleep, felt alone, felt sad, could not get going, felt happy, and enjoyed life. The last two "positive" items were reverse-coded. We used a cut-off of three or more symptoms to assess clinically significant depression (Glymour et al. 2012). We used the chronic physical conditions and depression measures to construct four mutually exclusive health status categories: First, respondents without MCC in 2014 and 2016 (reference). Second, individuals who had MCC without depression in 2014. Third, those who had MCC with depression in 2014. Fourth, individuals who had MCC onset in 2016. The sample size was too small for reliable analysis of the health status category MCC and depression onset in 2016 (n = 29). Using self-reported information, we distinguished between women and men, and between Non-Hispanic whites and Non-Hispanic Blacks. Given our interest in the intersection of race and gender, we conducted separate analyses for *Black women, Black men, white women,* and *white men*.

Controls

We controlled for age, marital status, physical mobility, change in self-rated health, obesity, health insurance, socioeconomic status (SES), and number of waves of participation. Respondents in the sample ranged in age from 50 to 94 years at baseline (2014). Because 62 years is the early-eligibility age for (reduced) retired worker benefits (Warner, Hayward and Hardy 2010), we dichotomized age to distinguish between individuals 62 years of age and older (=1) compared to those who were younger than 62. *Marital status* distinguished between those who were married/partnered (=1) versus all other statuses. We assessed *physical mobility* with a mobility index, which included whether respondents reported some difficulty in the ability to walk several blocks, walk one block, walk across the room, climb several flights of stairs, and climb one flight of stairs (Latham and Williams 2015). Self-rated health was measured on a 5-point scale with options including poor, fair, good, very good, and excellent. *Change in self-rated health* between 2014 and 2016 was used to control for the impact of potential changes in the severity of health problems that might also be associated with changes in employment behavior. The categories are same self-rated health (reference), worsened, and improved. Individuals with a body mass index of 30 or above were categorized as obese (=1). *Health insurance* is a categorical measure indicating uninsured (reference), government

insurance, respondent's employer-based insurance, and spouse's employer-based insurance.

We included five SES indicators: household income, wealth, occupation type, educational attainment, and full-time work status. *Household income* was measured by summing all wages and salaries. *Wealth* was calculated as the sum of all wealth less all debt. Both measures included responses from both spouses (for those respondents who were married), and were logged to adjust for skewness. Aligned with prior research (Brown and Hargrove 2013), a constant of one was added to each raw household income measure prior to logging, given that some respondents had values of 0, which cannot be logged. In the case of negative values for net worth, the absolute value of each measure was logged and multiplied by −1 (Brown and Hargrove 2013; Haas and Rohlfsen 2010). For *occupation type of longest-held job*, we distinguished among upper white-collar, lower white-collar, and blue-collar workers. Upper white-collar workers (reference) indicated working in managerial and professional/technical occupations while lower white-collar workers were in clerical, health services, or personal services professions. Blue-collar workers were employed in jobs that involved physical rigor/manual labor or industrial work (Jason et al. 2017). Educational attainment included less than high school (reference), GED/high school graduate/some college, and college graduate. *Full-time worker* (=1) indicated whether a respondent was working for 35 or more hours per week in 2014.

Of respondents who reported working in 2014, there was attrition (i.e., they did not participate in the 2016 wave) due to 74 deaths and 431 were lost due to non-response. Because there were so few deaths between 2014 and 2016, we were primarily concerned about attrition due to non-response. We adjusted the models for the number of waves in which respondents have participated in HRS (Warner and Brown 2011).

Analysis

In Table 1, we present descriptive statistics to provide an overview of the full sample and characteristics of the sample by race-gender. We also report pairwise significance tests which are reflective of Welch's t-tests for means with unequal variances. Next, multinomial logistic regression models were estimated to investigate how MCC status and depression influence changes in workforce behavior. Relative risk ratios (RRR) are reported. In Table 2, we present the regression results of the full sample. The base category for workforce status is "stopped working" as it is the most drastic transition. Next, we examined the association between health status and workforce engagement separately for Black women, Black men, white women, and white men. The race-gender stratified models are reported in separate panels in Table 3. In Table 4, to confirm race-gender group differences in the association between health status and workforce transitions, we report statistically significant interactions between race-gender and health status in pooled models. All regression models were estimated without the use of sampling weights. Because sampling was not based on the dependent measure, and one of the over-sampling criteria was included in the model as an independent variable (i.e., race), the coefficients are unbiased and efficient (Schnittker 2005; Winship and Radbill 1994). All analyses were performed using Stata 16.1.

Results

Descriptive Statistics

In Table 1, descriptive statistics are shown for the full sample: Black women, Black men, white women, and white men. Because we are interested in race-gender patterns, we discuss evidence of race-gender variation in the key dependent and independent measures. With regards to workforce engagement, white women (23%) are more likely to stop working compared to white men (20%). Black women and white women (14%) are also significantly less likely to have worked fewer hours compared to white men (17%). In terms of health status, Black women are the least likely to have no MCC in 2014. Black women (44%) also have higher rates of MCC without depression than Black men (35%), white men (39%), and white women

Table 1. Descriptive Statistics.

	Full sample	Black women	Black men	White women	White men	Sig tests*
	N = 4250	*N* = 617	*N* = 395	*N* = 1687	*N* = 1551	
Workforce engagement						
Stopped working	.21	.22	.22	.23	.20	f
Worked less	.15	.14	.17	.14	.17	cf
Worked same hours	.51	.51	.48	.52	.52	
Worked more	.12	.14	.14	.11	.11	
Health status						
No MCC $_{2014\text{-}2016}$ (reference)	.48	.38	.48	.52	.49	abcdf
MCC without depression$_{2014}$	.36	.44	.35	.33	.39	abcf
MCC with depression$_{2014}$	.08	.12	.09	.09	.06	bcf
MCC onset$_{2016}$	.06	.07	.09	.06	.06	d
Controls						
Age, 62+$_{2014}$	.43	.35	.33	.43	.49	bcdef
Married/partnered$_{2014}$	.70	.43	.70	.68	.84	abcef
Mobility index$_{2014}$ (range: 0–5)	.56 (1.01)	.88 (1.24)	.41 (.82)	.63 (1.03)	.40 (.89)	abcdf
Same SRH (reference)	.58	.57	.58	.59	.59	
Worsened SRH	.23	.22	.24	.23	.23	
Increased SRH	.18	.21	.19	.18	.17	
Obesity	.38	.57	.44	.35	.34	abcdef
Health insurance$_{2014}$						
Uninsured (reference)	.07	.12	.14	.05	.06	bcdef
Government insurance	.16	.16	.21	.15	.17	ade
Respondent employer-based insurance	.62	.64	.58	.62	.64	ade
Spouse employer-based insurance	.14	.08	.07	.18	.13	bcdef
(Log) income$_{2014}$ (range: 0–15.32)	11.13 (1.27)	10.41 (1.71)	10.82 (1.34)	11.21 (1.07)	11.40 (1.13)	abcdef
(Log) wealth$_{2014}$ (range: −13.92 to 17.15)	10.39 (5.98)	7.60 (7.17)	8.43 (6.64)	10.97 (5.41)	11.35 (5.41)	abcdef
Upper white-collar worker$_{2014}$	.34	.24	.20	.33	.43	bcdef
Lower white-collar worker$_{2014}$	.36	.45	.20	.51	.21	abcdf
Blue-collar worker$_{2014}$	.30	.31	.60	.16	.36	abcdef
Education						
Less than high school (reference)	.06	.12	.15	.04	.04	bcde
GED/high school diploma/some college	.59	.67	.63	.60	.54	bcef
College graduate	.35	.21	.22	.36	.42	bcdef
Full-time worker$_{2014}$	.67	.69	.77	.60	.72	abdef
Number of waves participation (range: 2–12)	6.60 (3.05)	5.63 (2.69)	5.30 (2.55)	7.14 (3.13)	6.73 (3.04)	abcdef

Source: Health and Retirement Study, 2014–2016.
Standard deviations in parentheses.
*Significance tests are based on Welch's unequal variance t-test to assess mean differences across race/gender groups ($p < .05$).
a Indicates significant difference between Black women and Black men.
b Indicates significant difference between Black women and white women.
c Indicates significant difference between Black women and white men.
d Indicates significant difference between Black men and white women.
e Indicates significant difference between Black men and white men.
f Indicated significant difference between white women and white men.
MCC = multiple chronic conditions (i.e., two or more); SRH = self-rated health.

(33%); moreover, white men have higher rates than white women. MCC with depression is most common among Black women (12%) who significantly differ from white women (9%) and white men (6%). MCC with depression is higher among white women compared to white men. Black men are more likely to experience MCC onset in 2016 (9%) relative to white women (6%).

The race-gender patterning of the controls is consistent with general cumulative disadvantage research, indicating relative disadvantage for Black women in terms of marriage, physical mobility, obesity, income, wealth, and educational attainment when compared to white women and men. Black men are more likely to be positioned in blue-collar work and uninsured, yet they have the highest rates of full-time employment in 2014 compared to the other race-gender groups. On average, Black men and women have participated in fewer waves compared to white men and women.

Regression Results: Full Sample

In Table 2, we present multinomial logistic regression models to address the extent to which health status affects workforce transitions between 2014 and 2016. The model assesses the extent to which all three MCC categories (i.e., MCC with depression, MCC without depression, and MCC onset) relative to No MCC influence workforce behavior. In the comparison between "worked less" and "stopped working," those who experience MCC without depression (RRR = .673, $p < .01$), MCC with depression (RRR = .682, $p < .10$), and MCC onset (RRR = .665, $p < .10$) are more likely to discontinue working compared to individuals who do not have MCC. When comparing "working the same" and "stopped working," individuals who experience MCC without depression (RRR = .654, $p < .001$), MCC with depression (RRR = .477, $p < .001$), and MCC onset (RRR = .585, $p < .01$) all are more likely to exit the labor force compared to those without MCC. When comparing the relative size of the MCC-related coefficients, the effect of MCC with depression is larger than MCC without depression. This provides evidence that depression has an additive negative influence on labor force exit when combined with MCC. In the comparison between "working more" and "stopped working," MCC without depression (RRR = .730, $p < .05$), MCC with depression (RRR = .489, $p < .01$), and MCC onset (RRR = .544, $p < .05$) are associated with a lower risk of working more hours. The MCC with depression and MCC without depression coefficients marginally differ, reflecting an additive effect of depression on workforce departure relative to working more.

In terms of the control measures, being older than 62 years, physical mobility challenges, and worsened self-rated health are associated with discontinuing work. Having employer-provided insurance is associated with higher risk of discontinuing work as opposed to working the same hours. Higher income, however, is associated with a greater likelihood of working less and working the same, in comparison to exiting the labor force. Wealth, on the other hand, is associated with greater likelihood of exiting the labor force compared to working the same or more hours. Full-time workers are more likely to continue working the same or more hours as opposed to discontinuing work entirely; however, full-time workers are less likely to work more compared to dropping out of the workforce. Participation in more waves of data collection is associated with higher risk of exiting the labor force compared to working the same or more hours.

To visually demonstrate the influence of health status on discontinuing work (the base category in the analysis shown in Table 2), we present predicted probabilities of "stopped working," based on results from Table 2, holding all covariates at their means. As shown in Figure 1, individuals with MCC and depression (27%) have the largest predicted probability of discontinuing work, followed by MCC Onset (24%) and MCC without depression (22%). Those without MCC have the lowest predicted probability of discontinuing work (15%) These findings suggest that MCC is likely to elicit labor force exit, but simultaneously experiencing MCC *and* depression induces labor force departure to an even greater degree.

Table 2. Multinomial Logistic Regression Models of the Effect of MCC and Depression on Workforce Engagement: Full Sample (N = 4250).

	Worked Less vs. Stopped Working	Worked Same vs. Stopped Working	Worked More vs. Stopped Working
Health status			
No $MCC_{2014\text{-}2016}$ (ref.)	1.000	1.000	1.000
MCC without $depression_{2014}$	.673**	.654***	.730*
	(.085)	(.065)	(.098)
MCC with $depression_{2014}$	.682^{+}	.477*** Δ	.489** Δ
	(.137)	(.076)	(.114)
$MCC\ onset_{2016}$	.665^{+}	.585**	.544*
	(.143)	(.099)	(.133)
Race/gender			
Black women (ref.)	1.000	1.000	1.000
Black men	.942	.775	.916
	(.215)	(.140)	(.217)
White women	1.001	1.027	.837
	(.178)	(.140)	(.153)
White men	1.191	1.058	.995
	(.220)	(.153)	(.191)
Controls			
Age, $62+_{2014}$	.620**	.540***	.483***
	(.092)	(.063)	(.079)
$Married/partnered_{2014}$	1.054	1.076	.948
	(.138)	(.109)	(.131)
$Mobility\ index_{2014}$	.860**	.911*	.836**
	(.050)	(.039)	(.052)
Same SRH (ref.)	1.000	1.000	1.000
Worsened SRH	.703**	.754**	.663**
	(.091)	(.076)	(.095)
Increased SRH	.792	.868	.955
	(.115)	(.098)	(.144)
Obese	1.136	1.057	1.147
	(.132)	(.097)	(.143)
$Health\ insurance_{2014}$			
Uninsured (ref.)	1.000	1.000	1.000
Government insurance	.774	1.122	.766
	(.187)	(.225)	(.188)
R's employer insurance	.630*	1.246	.732
	(.134)	(.225)	(.160)
Spouse's employer insurance	.691	1.127	.886
	(.175)	(.238)	(.227)
$Income_{2014}$	1.176**	1.134***	1.074
	(.061)	(.041)	(.050)
$Wealth_{2014}$	.986	.985^{+}	.979*
	(.010)	(.008)	(.010)
Upper white-collar $worker_{2014\ (ref.)}$	1.000	1.000	1.000
Lower white-collar $worker_{2014}$	1.052	1.108	.880
	(.145)	(.121)	(.132)

(continued)

Table 2. (continued)

	Worked Less vs. Stopped Working	Worked Same vs. Stopped Working	Worked More vs. Stopped Working
Blue collar worker$_{2014}$	.931	.917	.924
	(.144)	(.112)	(.151)
Education			
LT high school (ref.)	1.000	1.000	1.000
H.S./Some college	.864	1.165	1.289
	(.187)	(.204)	(.317)
College graduate	1.015	1.289	1.492
	(.249)	(.255)	(.414)
Full-time worker$_{2014}$	2.903***	2.188***	.634***
	(.377)	(.211)	(.082)
Number of waves participation	.995	.949**	.944*
	(.025)	(.018)	(.025)

Source: Health and Retirement Study, 2014–2016.
Relative Risk Ratios (RRR) reported; standard errors in parentheses.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.
MCC = multiple chronic conditions (i.e., two or more); SRH = self-rated health.
Δ Coefficients for MCC without depression and MCC with depression significantly differ ($p < .05$) for Worked Same versus Stopped Working, and marginally differ ($p < .10$) for Worked More versus Stopped Working.

Regression Results by Race-Gender

Although we found descriptive evidence of race-gender differences in labor force engagement and health status, it remains unclear whether the association between health status and labor force engagement operates similarly across race-gender groups. Given relative (dis)advantages along the dimensions of race and gender, intersectional and cumulative disadvantage perspectives suggest that the health-workforce engagement association could differ across these social categories. We ran separate models for Black women, Black men, white women, and white men. These results are shown in Table 3.

Panel A of Table 3 shows relative risk ratios (RRR) for Black women. MCC with depression (RRR = .361, $p < .01$) and MCC without depression (RRR = .602, $p < .10$) are associated with lower odds of working the same hours compared to disengaging from the workforce. The effect size for MCC with depression is significantly larger compared to MCC onset when comparing "worked same" and "stopped working." In comparing working more to discontinuing work, MCC without depression (RRR = .412, $p < .05$), MCC with depression (RRR = .283, $p < .05$), and MCC onset (RRR = .217, $p < .10$) were associated with higher risk of labor force departure.

The association between health status and workforce transitions for Black men is shown in Panel B. MCC onset is associated with greater risk of labor force exit compared to working fewer (RRR = .280, $p < .10$) or the same (RRR = .378, $p < .05$) hours. Hence, for Black men, recent onset of MCC is most likely to threaten their chances of remaining in the workforce.

In Panel C, results for white women show significant effects for MCC without depression, MCC with depression, and MCC onset: any circumstance of MCC is associated with greater odds of workforce departure compared to those who have no MCC. For example, white women who report MCC without depression (RRR = .563, $p < .001$), MCC with depression (RRR = .352, $p < .001$), and MCC onset (RRR = .409, $p < .001$) have greater risk of labor force exit compared to working the same hours. Post-hoc Wald tests revealed that the effect of MCC with depression is stronger than MCC without depression in the "worked same versus stopped

Table 3. Multinomial Logistic Regression Race/Gender-Stratified Models of the Effect of MCC and Depression on Workforce.

	Worked Less vs. Stopped Working	Worked Same vs. Stopped Working	Worked More vs. Stopped Working
Panel A: Black women (*N* = 617)			
Health status			
No $MCC_{2014\text{-}2016}$ (ref.)	1.000	1.000	1.000
MCC without $depression_{2014}$	.576	.602+	.412*
	(.203)	(.163)	(.150)
MCC with $depression_{2014}$	.600	.361** ^	.283*
	(.295)	(.134)	(.150)
$MCC\ onset_{2016}$	1.353	1.224	.217+
	(.836)	(.634)	(.194)
Panel B: Black men (*N* = 395)			
Health status			
No $MCC_{2014\text{-}2016}$ (ref.)	1.000	1.000	1.000
MCC without $depression_{2014}$	.912	.896	1.451
	(.401)	(.314)	(.628)
MCC with $depression_{2014}$	2.241	.868	1.054
	(1.473)	(.515)	(.851)
$MCC\ onset_{2016}$	.280+	.378*	.552
	(.194)	(.187)	(.378)
Panel C: White women (*N* = 1687)			
Health status			
No $MCC_{2014\text{-}2016}$ (ref.)	1.000	1.000	1.000
MCC without $depression_{2014}$	.599*	.563***	.651*
	(.124)	(.089)	(.141)
MCC with $depression_{2014}$	.528*	.352*** Δ	.349** Δ
	(.166)	(.087)	(.130)
$MCC\ onset_{2016}$	.276** II	.409***	.181** II
	(.111)	(.105)	(.091)
Panel D: White men (*N* = 1551)			
Health status			
No $MCC_{2014\text{-}2016}$ (ref.)	1.000	1.000	1.000
MCC without $depression_{2014}$	.723	.678*	.844
	(.150)	(.114)	(.195)
MCC with $depression_{2014}$	.557	.646	.781
	(.225)	(.193)	(.354)
$MCC\ onset_{2016}$	1.359 II	.820	1.819 II
	(.504)	(.271)	(.716)

Source: Health and Retirement Study, 2014–2016.

Risk Ratios (RRR) reported; standard errors in parentheses.

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Note: All models control for baseline (2014) age, married/partner status, mobility index, obesity, health insurance, income, wealth, occupational type, education, full-time work status, and number of waves participation. The models also adjust for changes in self-rated health between 2014 and 2016.

MCC = multiple chronic conditions (i.e., two or more).

Δ Coefficients for MCC with depression and MCC without depression significantly differ ($p < .05$) for Worked Same versus Stopped Working, and marginally differ (p <.10) for Worked More versus Stopped Working.

^ Coefficients for MCC with depression and MCC onset significantly differ ($p < .05$).

II Coefficients for MCC without depression and MCC onset marginally differ ($p < .10$) for Worked Less versus Stopped Working and significantly differ (p <.05) for Worked More versus Stopped Working.

Table 4. Significant Race-Gender Interactions With Health Status Based on Pooled Models.

	Worked Less vs. Stopped Working	Worked Same vs. Stopped Working	Worked More vs. Stopped Working
Black women as reference			
Black men x MCC with depression	4.312*	2.902+	
White women x MCC onset	.241*	.389+	
Black men x MCC without depression			3.203**
White men x MCC onset			6.268*
Black men as reference			
White men x MCC with depression	.283+		
Black women x MCC with depression	.250*		
White men x MCC onset	4.537*		4.704*
White women as reference			
Black men x MCC with depression	3.030+		
Black women x MCC onset	4.051+	2.775+	
White men x MCC onset	4.583**	2.041+	9.048***
Black men x MCC without depression			2.538*
White men as reference			
Black men x MCC with depression	4.193*		
Black men x MCC onset	.262+		
White women x MCC onset	.237**		.133**
Black men x MCC without depression			2.558*
Black women x MCC onset			.192+

Source: Health and Retirement Study, 2014–2016.
+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

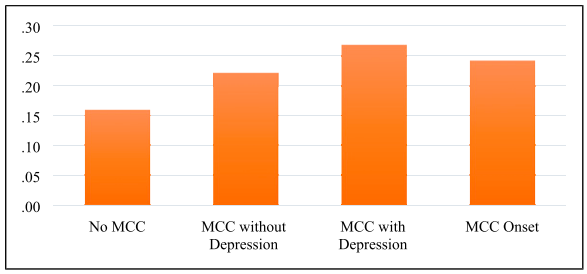
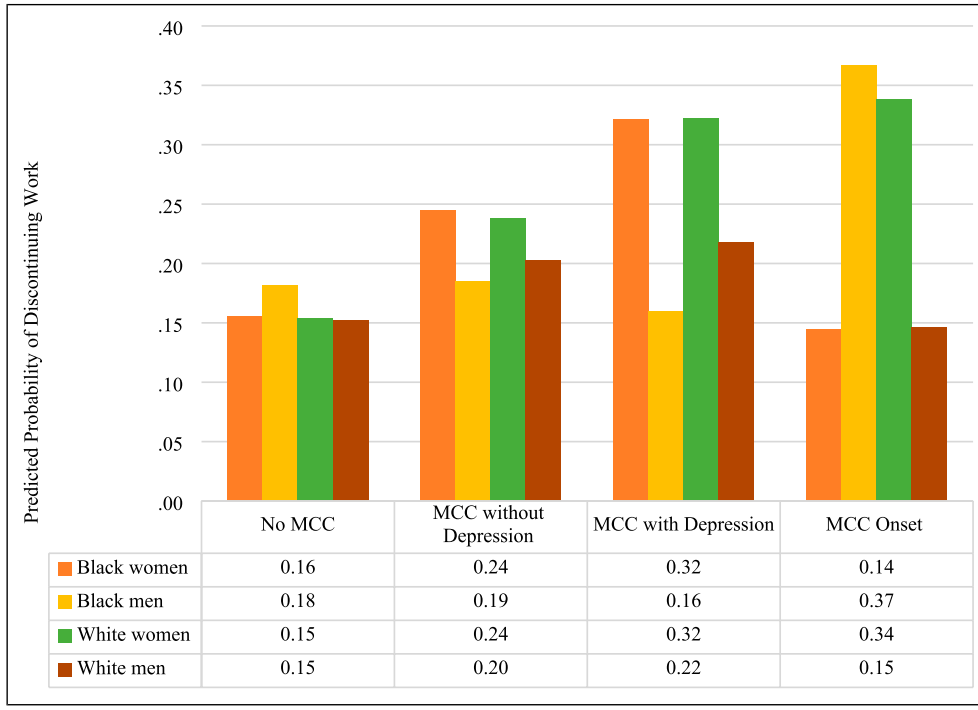


Figure 1. Predicted probabilities of discontinuing work by health status: full sample.

working" and "worked more versus stopped working" comparisons. Stately differently, relative to MCC without depression, MCC with depression is even more likely to induce labor force departure compared to working the same or more hours.

Results for white men are shown in Panel D. MCC without depression is associated with a relative lower risk of working less (RRR = .557, $p < .10$) compared to discontinuing work. MCC without depression is associated with greater risk for discontinuing work compared to working the same hours (RRR = .678, $p < .05$). While MCC onset appears to be associated with working less or working more (compared to discontinuing work), MCC without depression is more likely to transition white men out of the labor force.

Based on the race-gender stratified models presented in Table 3, we present predicted probabilities of "stopped working" by health status



	No MCC	MCC without Depression	MCC with Depression	MCC Onset
Black women	0.16	0.24	0.32	0.14
Black men	0.18	0.19	0.16	0.37
White women	0.15	0.24	0.32	0.34
White men	0.15	0.20	0.22	0.15

Figure 2. Predicted probabilities of discontinuing work by health status and race-gender.

across the four race-gender groups in Figure 2. Across all groups, the lowest predicted probabilities of workforce departure are among individuals with No MCC. MCC with depression is the health status category most likely to elicit departure from the workforce for Black women (.32). For Black men, MCC onset is associated the greatest likelihood of discontinuing work (.37). Among white women, MCC onset (.34) and MCC with depression (.32) rival each other in terms of the highest predicted probability of labor force exit. These distinctions in the health-workforce transition association across groups provide strong evidence that the current analysis merits an intersectional theoretical orientation.

To reinforce findings presented in Table 3 and Figure 2, we conducted a supplemental analysis to assess race-gender differences in the association between health status and workforce transitions by running statistical interactions between race-gender and health in pooled models. Statistically significant statistical interactions are reported in Table 4. Twenty-three statistical interactions emerged as significant, suggesting race-gender group differences in the association between health status and workforce transition. We believe the race-gender stratified models to be more easily interpretable, so we do not interpret each individual statistical interaction. Nonetheless, we observe three broad patterns. First, compared to their same-race male counterparts, women are more likely to discontinue work when they experience MCC. Second, relative to white women, Black women are more likely to remain in the workforce, opting to either work the same hours or reducing their work hours, when they experience MCC onset. Third, among men with MCC and depression, white men are more likely to exit the labor force than are Black men. Nevertheless, relative to white men, Black men are more likely to completely exit the labor force when they experience MCC onset.

Discussion and Conclusion

The current study had two aims. First, building on past research examining the effect of MCC on workforce engagement (Jason et al. 2017), we

assessed the extent to which having both MCC *and* depression negatively impacted labor force engagement among older workers (compared to MCC alone). Second, given the large body of work indicating race and gender disparities in health and employment trends, we examined the extent to which the association between health status and workforce engagement differed for Black women, Black men, white women, and white men. Below, we describe the study's major findings. We then outline study limitations as well as the theoretical and workforce policy implications.

Findings

Our analysis of a nationally representative sample of older workers demonstrates that MCC in combination with depression exerts *an additional* negative burden on labor force engagement relative to MCC alone. These results are compelling, as they confirm cross-sectional research suggesting negative effects of co-occurring physical and mental health problems on employment (von Korff 2009). These findings are significant, particularly because 36% of older workers in our sample report MCC without depression and another 8% experience MCC *with* depression. Given the high prevalence of MCC among older adults (Ralph et al. 2013), health challenges among older workers will continue to be a pressing issue in the United States which has witnessed a growing trend of older adults working beyond traditional retirement age and where healthcare costs continue to rise. Unequivocally, our study results confirm that comorbid MCC with depression has implications for older adults' ability to remain in the workforce. Moreover, longstanding racial and gender disparities in health and employment trends motivate an analysis of whether the health status-workforce engagement association differs by race-gender.

A Deeper Examination of Intersectional Cumulative (Dis)advantage

Using intersectionality in combination with CAD as orienting theoretical frameworks, our analysis confirms previous health research finding disproportionately higher rates of health problems for Black women. Consistent with the original argument advanced by intersectionality theory (Crenshaw 1991), Black women are the most disadvantaged along most dimensions, and consistent with cumulative disadvantage arguments, Black female older workers experienced the highest MCC prevalence rates, at a startling rate of 63%: while 44% have MCC without depression, 12% experience MCC with depression and another 7% experience MCC onset 2 years later. Despite being relatively younger than their white female and white male counterparts, they are the least likely to be partnered, have the most physical disability, highest obesity rates, earn the lowest income, accrue the least wealth, and are the least likely to be college educated. On the other hand, white men are the most advantaged for nearly all social markers and employment outcomes.

We also discover nuanced race-gender effects in the association between health status and work transitions. First, on one hand, MCC and depression negatively influences labor force participation for Black and white women; in fact, 32% of Black women and white women discontinue work when they experience MCC with depression. Thus, this finding runs counter to stereotypical images casting Black women as paragons of "strength" and invincibility (Beauboeuf-Lafontant 2009), and calls for deeper investigation of the attitudes, behaviors, and resources of older Black women workers. On the other hand, a different pattern emerges for MCC onset: Black women are more likely to remain in the workforce, opting to either work the same hours or reducing their work hours, when they experience MCC onset. Compared to their White female counterparts, perhaps Black women persist in working despite MCC onset due to higher risk aversion or heightened perceptions of instability in their current economic circumstances.

Second, though white women are the least likely to experience MCC, when MCC is accompanied by depression, it exerts a significantly higher risk of labor force exit than MCC without depression. This implies that white women

with comorbid MCC and depression are especially vulnerable with regards to being able to remain engaged in the labor force. Depression is a more socially acceptable mental health diagnosis for white women, with some even referring to it as a "white woman's disease" (Beaubouf-Lafontant 2009). The normalization of depression as a legitimate health problem among white women may also explain their greater likelihood of labor force departure when experiencing MCC and depression.

Third, consistent with past research on self-reported health (McDonough and Amick 2001), white men are more likely to exit the labor force than are Black men when they experience MCC with depression. This likely reflects older white men's ability to leave the labor force with greater ease than their more economically disadvantaged Black male peers. Nevertheless, Black men's workforce engagement is severely affected by MCC onset, a health predicament that seems to abruptly thrust them out of the workforce. Importantly, Black men are both the most likely to experience MCC onset, have the highest full-time workforce participation rate, and are the most likely to be uninsured of the race-gender groups studied here. Perhaps MCC onset exerts this powerful influence on workforce engagement because of more severe, chronic, or advanced-stage diagnoses of health conditions among older Black men in general (Gilbert et al. 2016). Black men must navigate a U.S. terrain in which they attempt to achieve gendered expectations of being a financial provider for their families in spite of constricted opportunity structures that stack the odds against them (Brown and Hargrove 2018; Gilbert et al. 2016). While striving for economic stability, they also contend with gendered-racialized discrimination across multiple domains of life including the education system, the criminal justice system, and the labor market (Collins 2000; Curry 2017; Mouzon et al. 2020). Despite seemingly insurmountable impediments to their economic success, our findings suggest that Black men remain engaged in the workforce until "health shocks" make it impossible to do so.

Importantly, Black adults, especially Black men, are underrepresented in health research. Researchers have recently begun to address recruitment challenges for this population in longitudinal research (e.g., reluctance due to the Tuskegee Syphilis Study, fear/mistrust of white people, physicians' failure to refer Black research subjects, and researchers' failure to recruit Black men) (Herring et al. 2004; Portacolon et al. 2020). The HRS data is amongst the best representative data available for older Black adults. Even so, more data collection efforts and empirical research should focus on providing methodologically precise estimates of health and workforce engagement of Black men.

Limitations

Despite its strengths, this study has some limitations. First, we were unable to assess whether direct or indirect person and job stereotyping led to declines in work hours, or if certain types of workplaces encouraged the retention of older workers; nonetheless, this should be part of the broader conversation pertaining to the experience of older adults in the workplace. Although we have assumed that health impacts workforce engagement (McDonough and Amick 2001), workplace dynamics can affect physical and psychological health (Stainback, Jason, and Walter 2018; Burgard, Brand, and House 2007). Furthermore, unstable and inconsistent work arrangements can elicit distress (Benach et al. 2014). Future research should further disentangle the bi-directional association between health and work. Nevertheless, given the longitudinal design of this study, we provide a more stringent assessment of the extent to which health problems impact workforce engagement relative to prior research (e.g., von Korff 2009).

Second, research has shown that older Black adults are more likely than their white counterparts to have negative attitudes toward mental health treatment and to report internalized stigma (Conner, Koeske, and Brown 2009). As such, Black older workers may be less likely to report experiencing depressive symptoms, or avoid medical treatment when they do experience symptoms. Future research

should assess the role of gendered and racialized dynamics concerning perceptions of depression and mental illness stigma across race-gender, and ascertain whether more serious mental health problems influence workforce engagement for diverse older workers.

Third, this study does not account for the experiences of older adults who are unemployed but looking for work, homeless, reside in institutions or otherwise not in the labor market. Cumulative disadvantages over the life course explain the life processes that eliminated these adults from sample selection, as adversity and stressors in early life affect later life health, which, in turn, influences work outcomes (Ferraro et al. 2016; Turner, Thomas, and Brown 2016). Given higher death rates of Black individuals (compared to whites) in early through mid-life (Arias and Xu 2019), individuals with the most serious health problems may have already died and were, thus, not included in the sample. As a result, our study may yield somewhat conservative estimates of the impact of health on workforce transitions for racial minorities in particular. Future research should integrate intersectional and CAD frameworks to elucidate processes that promote or inhibit workforce engagement in late life.

Theoretical Implications

The current study integrated two complementary theoretical perspectives, intersectionality and CAD, to highlight how racism and sexism, as two systems of stratification, condition the effect of health on workforce engagement. Over the life course, Black women and Black men experience disproportionately high levels of discrimination, which play a critical role in producing differentials in health along the dimensions of race and gender. Cumulative advantages and disadvantages that begin early in life go on to influence workforce-related decision-making in later life (Chae et al. 2014). Nevertheless, despite health disadvantages experienced by Black women and, to some extent, Black men, our study findings reveal they are more likely to remain in the workforce relative to white women and white men when they experience MCC and depression.

These findings speak to how cumulative intersectional disadvantages accrue in a manner that elicits poor health while simultaneously prompting continued workforce engagement among older Black workers. An alternative theoretical perspective for understanding Black men's orientation to the labor market is the "subordinate male target hypothesis" which suggests that Black men may experience more frequent discrimination than Black women because they pose a greater threat to white male dominance (Mouzon et al. 2020; Sidanus and Veniegas 2000). Greater consideration of the unique gendered-racialized discrimination Black men endure will enhance our understanding of how Black male older workers are disadvantaged in the labor market.

Workplace Policy and Practice Implications

Along with the increase in older adults', women's, and racial minorities' labor participation rates, changing social and cultural norms, legal protections, and economic mobility have accompanied the integration of previously marginalized workers (Schultz and Adams 2019). As the job market becomes more diverse, it is important to consider how organizational context may influence the well-being of workers. Stainback et al. 2018 found, for example, that among Black workers, psychological distress is significantly lower when the job is Black-dominated (i.e., >75% Black workers). This is one example of many workplace factors that could influence well-being. Issues of power and inequality, which often elicit stress, depression, and poor health, are prevalent across all occupations (Harvey Wingfield 2013). Harvey Wingfield (2020) recommends sociology of work research to center the workplace and apply intersectionality theory as a means to explore organizational practices that maintain inequality. We agree. Our findings suggest that identifying workplace attributes that promote the retention of older workers with chronic illness and depression, as well as acknowledging

the roles of racism, sexism, and ageism will decrease disparities in work engagement among older workers. We offer some recommendations here.

First, we suggest workplaces develop innovative ways to better support older workers working longer. These include more nuanced approaches to flexible work arrangements, alternative retirement options such as staged and phase retirement, as well as investment in workplace equipment, supplies, and procedures that ergonomically support workers, reducing discomfort and injury risk. Second, workplaces need better enforcement of the American Disabilities Act (ADA) to protect workers with cognitive and physical disabilities from discrimination in employment opportunities and workers with disabilities need to be better informed on ADA protections and routes to file grievances, if necessary. Third, workplaces should invest in external professional consultation to better understand how racism, sexism, and ableism operate locally with a goal of developing effective programs to increase social support and minimize discrimination in response to such feedback. Fourth, we recommend stronger enforcement of race, gender, and age discrimination sanctions. It is important to consider that older workers, aside from any physical or mental problems, or race and gender categories, are more likely to face job discrimination due to age-related stereotypes (Webster, Thoroughgood, and Sawyer 2019). The perception that older workers are unhealthy, less productive, and intend to retire soon promotes ageism, makes work more challenging, and encourages the transition out of the workforce.

In many cases, it is necessary for older workers to exit the workforce due to their debilitating health conditions or necessity to provide care work. For those who cannot work longer, our fifth and final recommendation is that workplaces should work with legislature and create policies to ensure economic security and safety through Social Security, retirement, or public assistance so that older workers can retire or exit under less financially precarious conditions (Gatta 2018). This is especially important given labor market shifts and spikes in retirement and voluntary and involuntary workforce exit due to coronavirus (COVID-19). Older workers have been hit harder by the effects of COVID-19 than any other demographic (Economic Policy Institute 2020), and the effects of coronavirus have disproportionately affected Black workers, women caregivers, and low-wage workers (CDC 2020; Spurk and Straub 2020). Future research should examine the effects of the COVID-19 pandemic on older workers' employment, retirement, and health.

Health risks for older workers will continue to raise their unemployment rates. Understanding how social inequalities along the dimensions of race and gender influence labor market participation and retirement patterns provides a deeper understanding of how health disparities provoke unequal life outcomes. These findings compel us to promote an intersectional cumulative (dis) advantage lens through which we understand how social status affects physical health, psychological well-being, and work processes that unfold later in the life course.

Acknowledgments

The authors would like to thank Drs. Teresa Scheid and Dawn Carr for feedback on earlier drafts. The authors would also like to thank the anonymous reviewers for additional comments.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: The first author reports funding from Advanced Respiratory Research for Equity (AIRE) Programs to Increase Diversity Among Individuals Engaged in Health-Related Research (PRIDE) Grant # 2R25- HL126140. The second author reports funding from the Ford Foundation

Postdoctoral Fellowship Program and funding from Behavioral Sleep Medicine (BSM) Programs to Increase Diversity Among Individuals Engaged in Health-Related Research (PRIDE) Grant # R25HL105444.

ORCID iDs

Kendra Jason https://orcid.org/0000-0002-1796-1196
Christy L. Erving https://orcid.org/0000-0001-5619-5482

Notes

1. There is much discussion regarding how intersectionality has been explored in empirical research (e.g., Bauer and Scheim 2019; Bowleg 2008; Collins 2000). In the context of quantitative scholarship, intercategorical (across-group comparative) studies tend to rely on statistical methods (e.g., two-way statistical interactions) that provide comparisons across groups (e.g., Brown and Hargrove 2013; Brown et al. 2016), while other scholars suggest that qualitative research best lends itself to examining intersectionality's theoretical complexities (Bowleg 2008; Wilkinson 2003). We submit that quantitative methodological approaches contribute to a growing body of intersectionality inspired-research, and we aspire to contribute to this literature through an examination of race-gender distinctions in the association between health status and workforce transitions.
2. We recognize the possibility of left censoring (i.e., some race-gender groups are more likely to have already exited the labor force). Supplemental analysis revealed that white women with MCC (with or without depression) were more likely to be not working for pay compared to the other race-gender groups in 2014.
3. For some health problems (e.g., diabetes), respondents were queried regarding whether they were currently receiving treatment. Here, receiving treatment is complicated by our operationalization of physical health status (MCC). If a given individual has two or more conditions, there is a possibility that he or she may be receiving treatment for one condition but not the other(s). Because of this complexity, we opted to not include treatment, as the primary objective is to ascertain the extent to which being diagnosed with two or more of any chronic conditions is associated with labor force transitions.

References

Abrams, Leah R. and Neil K. Mehta. 2019. "Changes in Depressive Symptoms Over Age Among Older Americans: Differences by Gender, Race/Ethnicity, Education, and Birth Cohort." *Social Science & Medicine: Population Health* 7: 100399.

Addo, Fenaba and Daniel L. Lichter. 2013. "Marriage, Marital History, and Black- White Wealth Differentials Among Older Women." *Journal of Marriage and Family* 75:342–362.

Aguayo-Romero, Rodrigo. 2021. "(Re) centering Black Feminism Into Intersectionality Research." *American Journal of Public Health* 111(1): 101–103.

Arias, Elizabeth and Jiaquan Xu. 2019. "United States Life Tables" in National Vital Statistics Reports, Vol. 68(7). Hyattsville, MD: National Center for Health Statistics.

Bauer, Greta R. and Ayden I. Scheim. 2019. "Advancing Quantitative Intersectionality Research Methods: Intracategorical and Intercategorical Approaches to Shared and Differential Constructs." *Social Science & Medicine* 226: 260–262.

Beauboeuf-Lafontant, Tamara. 2009. *Behind the Mask of the Strong Black Woman: Voice and the Embodiment of a Costly Performance*. Philadelphia: Temple University Press.

Belgrave, Linda L., Marie R. Haug, and Franciso Xavier Gómez-Bellengé. 1987. "Gender and Race Differences in Effects of Health and Pension on Retirement before 65." *Comprehensive Gerontology. Section B, Behavioural, Social, and Applied Sciences* 1(3):109–117.

Benach, Joan, Alejandra Vives, Marcelo Amable, Christophe Vanroelen, Gemma Tarafa, and Carles Muntaner. 2014. "Precarious Employment: Understanding an Emerging Social Determinant of Health." *Annual Review of Public Health* 35:229–253.

Berecki-Gisolf, Janneke, Jayne Lucke, Richard Hockey, and Annette Dobson. 2008. "Transitions

into Informal Caregiving and Out of Paid Employment of Women in Their 50s." *Social Science & Medicine* 67(1):122–127.

Bodenheimer, Thomas, Ellen Chen, and Heather D. Bennett. 2009. "Confronting the Growing Burden of Chronic Disease: Can the U.S. Health Care Workforce Do the Job?." Health Affairs *(Project Hope)* 28(1):64–74.

Boyd, Cynthia M, and Martin Fortin. 2010. "Future of Multimorbidity Research: How Should Understanding of Multimorbidity Inform Health System Design?." *Public Health Reviews* 32(2): 451–474.

Bowleg, Lisa. 2008. "When Black + Lesbian + Woman ≠ Black Lesbian Woman: The Methodological Challenges of Qualitative and Quantitative Intersectionality Research." *Sex Roles* 59:312–325.

Branch, Enobong H and Caroline Hanley. 2017. "A Racial-Gender Lens on Precarious Nonstandard Employment." Pp. 183–213." In Precarious Work: Research in the Sociology of Work, edited by A. L. Kalleberg and S. P. Vallas, eds, Vol. Vol. 31. Emerald Publishing Limited.

Brown, Tyson H. and Taylor Hargrove. 2013. "Multidimensional Approaches to Examining Gender and Racial/Ethnic Stratification in Health." *Women, Gender, and Families of Color* 1(2):180–206.

Brown, Tyson H. and Taylor W. Hargrove. 2018. "Psychosocial Mechanisms Underlying Older Black Men's Health." *Journals of Gerontology: Psychological Sciences* 73(2):188–197.

Brown, Tyson H., Liana J. Richardson, Taylor W. Hargrove, and Courtney S. Thomas. 2016. "Using Multiple-Hierarchy Stratification and Life Course Approaches to Understand Health Inequalities: The Intersecting Consequences of Race, Gender, SES, and Age." *Journal of Health and Social Behavior* 57(2):200–222.

Brown, Tyson H. and David F. Warner. 2008. "Divergent Pathways? Racial/Ethnic Differences in Older Women's Labor Force Withdrawal." *The Journals of Gerontology: Series B* 63(3): S122–S134.

Burgard, Sarah A., Jennie, E. Brand, and James, S. House. 2007. "Toward a Better Estimatino of the Effect of Job Loss on Health." *Journal of Health and Social Behavior* 48(4):369–384.

Cahill, Kevin E., Michael D. Giandrea, and Joseph F. Quinn. 2006. "Retirement Patterns from Career Employment." *The Gerontologist* 46(4):514–523.

Calasanti, Toni. 2020. "Brown Slime, the Silver Tsunami, and Apocalyptic Demography: The Importance of Ageism and Age Relations." *Social Currents* 7(3):195–211.

Centers for Disease Control (CDC). 2020. *Health Equity Considerations & Racial and Ethnic Minority Groups*. Retrieved from https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/race-ethnicity.html November 7, 2020.

Chae, David H., Amani M. Nuru-Jeter, Nancy E. Adler, Gene H. Brody, Jue Lin, Elizabeth H. Blackburn, and Elissa S. Epel. 2014. "Discrimination, Racial Bias, and Telomere Length in African-American Men." *American Journal of Preventive Medicine* 46(2):103–111.

Chancer Lynn S., Martín Sánchez-Jankowski, and Christine Trost, eds 2018. *Youth, Jobs, and the Future: Problems and Prospects*. Oxford, UK: Oxford University Press.

Choi, Eunhee, Fengyan Tang, and Carr Valire Copeland. 2017. "Racial/Ethnic Inequality Among Older Workers: Focusing on Whites, Blacks, and Latinos Within the Cumulative Advantage/Disadvantage Framework." *Journal of Social Service Research* 43(1):18-36.

Cobb, Ryon J., Lauren J. Parker, and Roland J. Thorpe. 2020. "Self-reported Instances of Major Discrimination, Race/Ethnicity, and Inflammation Among Older Adults: Evidence from the Health and Retirement Study." The Journals of Gerontology, *Series A* 75(2):291–296.

Collins, Patricia Hill. 2000. *Black Feminist Thought: Knowledge, Consciousness, and the Politics of Empowerment*. United Kingdom: Routledge.

Collins, Patricia Hill and Sirma Bilge. 2020. *Intersectionality*. John Wiley & Sons.

Conner, Kyaien, Koeske Gary, and Charlotte, Brown. 2009. "Racial Differences in Attitudes Toward Professional Mental Health Treatment: The Mediating Effect of Stigma." *Journal of Gerontological Social Work* 52:695–712.

Crenshaw, Kimberle. 1989. *Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics*, 139–167. The University of Chicago Legal Forum.

Crenshaw, Kimberlé. 1991. "Mapping the Margins: Identity Politics, Intersectionality, and Violence Against Women." *Stanford Law Review* 43(6): 1241–1299.

Curry, Tommy J. 2017. *The Man-Not: Race, Class, Genre, and the Dilemmas of Black Manhood*. Philadelphia: Temple University Press.

Dannefer, Dale. 2003. "Cumulative Advantage/ Disadvantage and the Life Course: Cross-Fertilizing Age and Social Science Theory." *The Journals of Gerontology: Series B* 58(1): S327–S337.

Economic Policy Institute. 2020. "Older Workers and Covid-19: The Harsh Realities."https://www.epi.org/research/older-workers/. November 7, 2020.

Emptage, Nicholas P., Roland Sturm, and Rebecca, L. Robinson. 2005. "Depression and Comorbid Pain as Predictors of Disability, Employment, Insurance Status, and Health Care Costs." Psychiatric Services *(Washington, D.C.)* 56(4): 468–474.

Erving, Christy L., and Cleothia Frazier. 2021. "The Association between Multiple Chronic Conditions and Depressive Symptoms: Intersectional Distinctions by Race, Nativity, and Gender." *Journal of Health and Social Behavior*. 1–19.

Fairlie, Robert W., Kanika Kapur, and Susan Gates. 2016. "Job lock: Evidence from a Regression Discontinuity Design." *Industrial Relations: A Journal of Economy and Society* 55(1):92–121.

Ferraro, Kenneth F., Blakelee R. Kemp, and Monica M. Williams. 2017. "Diverse Aging and Health Inequality by Race and Ethnicity." *Innovation in Aging* 1(1):igx002.

Ferraro, Kenneth F. and Kelley-Moore, Jessica A. 2003. "Cumulative Disadvantage and Health: Long-Term Consequences of Obesity?." *American Sociological Review* 68(5):707–729.

Ferraro, Kenneth F., Markus H. Schafer, and Lindsay Wilkinson. 2016. "Childhood Disadvantage and Health Problems in Middle and Later Life: Early Imprints on Physical Health?." *American Sociological Review* 81:107–133.

Gatta, Mary. 2018. *Waiting on Retirement: Aging and Economic Insecurity in Low-Wage Work*. California: Stanford University Press.

George, Linda. 2003. "Life Course Research," 671–680. *in* Handbook of the life course. Boston, MA: Springer.

Gilbert, Keon L., Rashawn Ray, Arjumand Siddiqi, Shivan Shetty, Elizabeth A. Baker, Keith Elder, and Derek M Griffith. 2016. "Visible and Invisible Trends in Black Men's Mental Health: Pitfalls and Promises for Addressing Racial, Ethnic, and Gender Inequities in Health." *Annual Review of Public Health* 37:295–311.

Glymour, M. Maria, Jessica J. Yen, Anna Kosheleva, J. Robin Moon, Benjamin Capistrant, and Kristen K Patton. 2012. "Elevated Depressive Symptoms and Incident Stroke in Hispanic, African-American, and White Older Americans." *Journal of Behavioral Medicine* 35: 211–220.

Greenberg, Paul E., Ronald C. Kessler, Howard G. Birnbaum, Stephanie A. Leong, Sarah W. Lowe, Patricia A. Berglund, and Patricia K. Corey-Lisle. 2003. "The Economic Burden of Depression in the United States: How Did It Change between 1990 and 2000?." *The Journal of Clinical Psychiatry* 64(12):1465–1475.

Gureje, Oye and Bibilola Oladeji. 2009. "Women, Depression, and Mental-Physical Comorbidity: Chronic Pain as a Mediating Factor." Pp. 183–190. in *Global Perspectives on Mental-Physical Comorbidity in the WHO World Mental Health Surveys*, edited by M. R. Von Korff, K. M. Scott, and O. Gureje. New York: Cambridge University Press.

Gustman, Alan and Thomas Steinmeier. 2009. "How Changes in Social Security Affect Recent Retirement Trends." *Research on Aging* 31(2): 261–290.

Haas, Steven A. and Lean Rohlfsen. 2010. "Lifed Course Determinants of Racial and Ethnic Disparities in Functional Health Trajectories." *Social Science & Medicine* 70(2):240–250.

Harvey Wingfield, Adia. 2013. *No More Invisible Man: Race and Gender in Men's Work*. Philadelphia: Temple University Press.

Harvey Wingfield, Adia. 2020. "Where Work Has Been, Where It Is Going: Considering Race, Gender, and Class in the Neoliberal Economy." *Sociology of Race and Ethnicity* 6(2):137–145.

Herring, Patti, Montgomery, Susanne, Yancey, Antronette K., Williams, David, and Fraser,

Gary. 2004. "Understanding the Challenges in Recruiting Blacks to a Longitudinal Cohort Study: The Adventist Health Study." *Ethnicity and Disease* 14:3423–3430.

Hinze, Susan W., Lin, Jielu, and Andersson, Tanetta. 2012. "Can We Capture the Intersections? Older Black Women, Education, and Health." *Women's Health Issues* 22(1):91–98.

Hogan, Richard and Carol Perrucci. 2007. "Black Women: Truly Disadvantaged in the Transition from Employment to Retirement Income." *Social Science Research* 36(3):1184–1199.

Hollingshaus, Michael S and Rebecca L. Utz. 2013. "Depressive Symptoms Following the Diagnosis of Major Chronic Illness." *Society and Mental Health* 3(1):22–39.

Jason, Kendra J., Dawn C. Carr, Tiffany R. Washington, Tandrea S. Hilliard, and Chivon A. Mingo. 2017. "Multiple Chronic Conditions, Resilience, and Workforce Transitions in Later Life: A Socioecological Model." *The Gerontologist* 57(2): 269–281.

Kalleberg, Arne. 2011. *Good Jobs, Bad Jobs: The Rise of Polarized and Precarious Employment Systems in the United States, 1970s-2000s*. New York: Russell Sage Foundation.

Kalleberg, Arne. 2018. "Precarious Work and Young Workers in the United States." Pp. 35–52. In *Youth, Jobs, and the Future: Problems and Prospects*, edited by L. S. Chancer, M. Sanchez-Jankowski and C. Trost. Oxford Scholarship Online.

Koford, Brandon C. and Attila Cseh. 2015. "Older Americans, Depression, and Labor Market Outcomes." *Eastern Economic Journal* 41:70–85.

Koolhaas, Wendy., Jac J. L. van der Klink, Johanna P. M. Vervoort, Michiel R. de Boer, Sandra Brouwer, and Johan W. Groothoff. 2013. "In-Depth Study of the Workers' Perspectives to Enhance Sustainable Working Life: Comparison between Workers with and without a Chronic Health Condition." *Journal of Occupational Rehabilitation* 23(2):170–179.

Koroukian, Siran M., Nicholas Schiltz, David F. Warner, Jiayang Sun, Paul M. Bakaki, Kathleen A. Smyth, Kurt C. Stange, and Charles W. Given. 2016. "Combinations of Chronic Conditions, Functional Limitations, and Geriatric Syndromes that Predict Health Outcomes." *Journal of General Internal Medicine* 31(6):630–637.

Latham, Kenzie and Monica M. Williams. 2015. "Does Neighborhood Disorder Predict Recovery from Mobility Limitation? Findings from the Health and Retirement Study." *Journal of Aging and Health* 27(8):1415–1442.

LaVeist, Thomas. 2005. "Disentangling Race and Socioeconomic Status: A Key to Understanding Health Inequalities." *Journal of Urban Health* 82(3):26–34.

Lerner, Debra, Saralynn Allaire, and Susan Reisine. 2005. "Work Disability Resulting from Chronic Health Conditions." *Journal of Occupational and Environmental Medicine* 47:253–264.

Lewis, Tené T., Courtney D. Cogburn, and David R. Williams. 2015. "Self-Reported Experiences of Discrimination and Health: Scientific Advances, Ongoing Controversies, and Emerging Issues." *Annual Review of Clinical Psychology* 11:407–440.

Luo, Zheihui, Alexander J. Cowell., Yuta J. Musuda, Scott P. Novak, and Eric O. Johnson. 2010. "Course of Major Depressive Disorder and Labor Market Outcome Disruption." *Journal of Mental Health Policy and Economics* 13(3): 135–149.

McDonough, Peggy and Benjamin C. Amick III. 2001. "The Social Context of Health Selection: A Longitudinal Study of Health And Employment." *Social Science & Medicine* 53: 135–145.

Moore, Kyle, Teresa Ghilarducci, and Anthony Webb. 2019. "The Inequitable Effects of Raising the Retirement Age on Blacks and Low-Wage Workers." *The Review of Black Political Economy* 46(1):22–37.

Mouzon, Dawne A., Robert Joseph Taylor, Ann W. Nguyen, Mosi Adesina Ifatunji, and Linda M. Chatters. 2020. "Everyday Discrimination Typologies Among Older African Americans: Gender and Socioeconomic Status." *Journals of Gerontology: Social Sciences* 75(9):1951–1960.

Portacolon, Elena., Nynikka R. Palmer, Peter Lichtenberg, Catherine M. Waters, Carl V. Hill, Sahru Keiser, Leah Vest, Marsha Maloof, Thi Tran, Paula Martinez, Javier Guerrero, and Julene K Johnson. 2020. "Earning the Trust of African American Communities to Increase

Representation in Dementia Research." *Ethnicity and Disease* 30(2):719–734

Ralph, Nancy L., Mielenz, Thelma J., Parton, Hilary, Flatley, Anne Marie, and Thorpe, Lorna. 2013. "Multiple Chronic Conditions and Limitations in Activities of Daily Living in a Community-Based Sample of Older Adults in New York City, 2009." *Preventing Chronic Disease* 10: E199.

Rodriquez, Erik, Steven Gregorich, Jennifer Livaudais-Toman, and Eliseo Pérez-Stable. 2017. "Coping with Chronic Stress by Unhealthy Behaviors: A Re-Evaluation among Older Adults by Race/Ethnicity." *Journal of Aging and Health* 29(5):805–825.

Rosenfield, Sarah and Dawne Mouzon. 2013. "Gender and Mental Health.". 277-296. In *Handbook of the Sociology of Mental Health*. 2nd Ed.. Handbooks of Sociology and Social Research. New York, NY, US: Springer Science + Business Media.

Rudolph, Kara E. and William W. Eaton. 2016. "Previous Anxiety and Depression as Risk Factors for Early Labour Force Exit." *Journal of Epidemiology & Community Health* 70(4): 390–395.

Sánchez-Moreno, Esteban, Lorena P. Gallardo-Peralta, Ana Barrón, Andrés Arias-Astray, and Iria-Noa de la Fuente-Roldán. 2016. "Employment Status and Health in Spain Before and After the Great Recession." *Social Currents* 3(4):386–402.

Schnittker, Jason. 2005. "Chronic Illness and Depressive Symptoms in Late Life." *Social Science & Medicine* 60:13–23.

Schulz, Amy and Leith Mullings. 2006. *Gender, Race, Class, & Health: Intersectional Approaches*. Jossey-Bass.

Shultz, Kenneth and Gary Adams. 2019. "Diversity Issues for an Aging Workforce." 7–23 In *Aging and Work in the 21st Century*, edited by K. S. Shultz and G. A. Adams. New York: Psychology Press.

Segel-Karpas, Dikla, Liat Ayalon, and Margie E. Lachman. 2018. "Retirement and Depressive Symptoms: A 10-Year Cross-Lagged Analysis." *Psychiatry Research* 269:565–570.

Shadmi, Efrat. 2013. "Multimorbidity and Equity in Health." *International Journal for Equity in Health* 12(August):59.

Sidanius, Jim and Rosemary C. Veniegas. 2000. "Gender and Race Discrimination: The Interactive Nature of Disadvantage." *Reducing Prejudice and Discrimination* 1:47–69.

Spence, Jay, Nickolai Titov, Karen Solley, Blake F. Dear, Luke Johnston, Bethany Wootton, Alice Kemp, et al. 2011. "Characteristics and Treatment Preferences of People with Symptoms of Posttraumatic Stress Disorder: An Internet Survey." *PLoS ONE* 6(7):e21864.

Spurk, Daniel, and Caroline Straub. 2020. "Flexible Employment Relationships and Careers in Times of the COVID-19 Pandemic." *Journal of Vocational Behavior* 119:103435.

Stainback, Kevin and Donald Tomaskovic-Devey. 2012. *Documenting Desegregation: Racial and Gender Segregation in Private Sector Employment Since the Civil Rights Act*. New York: Russell Sage Foundation.

Stainback, Kevin, Kendra Jason, and Charles Walter. 2018. "Organizational Context and the Well-Being of Black Workers: Does Racial Composition Affect Psychological Distress?." Pp. 137-64 in *Race, Identity and Work*. Bingley: Emerald Publishing Limited.

Stewart, Walter F., Judith A. Ricci, Elsbeth Chee, Steven R. Hahn, and David Morganstein. 2003. "Cost of Lost Productive Work Time among US Workers with Depression." *Journal of the American Medical Association* 289 (23):3135–3144.

Thomeer, Mieke Beth. 2016. "Multiple Chronic Conditions, Spouse's Depressive Symptoms, and Gender within Marriage." *Journal of Health and Social Behavior* 57(1):59–76.

Tomaskovic-Devey, Donald, Catherine Zimmer, Stainback Kevin, Corre Robinson, Tiffany Taylor, and Tricia McTague. 2006. "Documenting Desegregation: Segregation in American Workplaces by Race, Ethnicity, and Sex, 1966–2003." *American Sociological Review* 71(4):565–588.

Toossi, Mitra. 2013. "Labor Force Projections to 2022: The Labor Force Participation Rate Continues to Fall." *Monthly Labor Review*. U.S. Bureau of Labor Statistics.

Toossi, Mitra. and Elika Torpey. 2017. "Older Workers: Labor Force Trends and Career Options." In *Career Outlook*. U.S. Bureau of Labor Statistics.

Tunceli, Kaan, Cathy J. Bradley, David Nerenz, Keoki Williams, Mane Plladevall, and Jennifer Elston Lafata. 2005. "The Impact of Diabetes on Employment and Work Productivity." *Diabetes Care* 28(11):2662–2667.

Turner, R. Jay, Courtney S. Thomas, and Tyson H. Brown. 2016. "Childhood Adversity and Adult Health: Evaluating Intervening Mechanisms." *Social Science & Medicine* 156: 114–124.

Umberson, Debra, Kristi Williams, Patricia Thomas, Hui Liu, and Mieke Beth Thomeer. 2014. "Race, Gender, and Chains of Disadvantage: Childhood Adversity, Social Relationships, and Health." *Journal of Health and Social Behavior* 55(1):20–38.

Van Rijn, Rogier M., Suzan J. W. Robroek, Sandra Sandra, and Alex Burdorf. 2014. "Influence of Poor Health on Exit From Paid Employment: A Systematic Review." *Occupational and Environmental Medicine* 71:295–301.

von Korff, Michael R. 2009. "Labor Force Participation, Unemployment, and Mental-Physical Comorbidity." Pp. 249–255 in Global Perspectives on Mental-Physical Comorbidity in the WHO World Mental Health Surveys *(*M. R. Von Korff, K. M. Scott, and O. Gureje, editors).

Wang, Philip S., Arne L. Beck, Patricia Berglund, David K. McKenas, Nicolaas P. Pronk, Gregory E. Simon, and Ronald C. Kessler. 2004. "Effects of Major Depression on Moment-in-Time Work Performance." *American Journal of Psychiatry* 161:1885–1891.

Wang, Sylvia Y. and Giyeon Kim. 2019. "The Relationship between Physical-Mental Comorbidity and Subjective Well-Being Among Older Adults." *Clinical Gerontologist*. Published Online March 4, 2019.

Ward, Brian W. and Jeannine S. Schiller. 2013. "Prevalence of Multiple Chronic Conditions Among US Adults: Estimates from the National Health Interview Survey, 2010." *Preventing Chronic Disease* 10:1–15.

Warner, David F. and Tyson H. Brown. 2011. "Understanding How Race/Ethnicity and Gender Define Age-Trajectories of Disability: An intersectionality approach." *Social Science & Medicine* 72:1236–1248.

Warner, David F., Mark D. Hayward, and Melissa A. Hardy. 2010. "The Retirement Life Course in America at the Dawn of the Twenty-First Century." *Population Research and Policy Review* 29:893–919.

Webster, Jennica, Christian Thoroughgood, and Katina Sawyer. 2019. "Diversity Issues for an Aging Workforce: An Intersectionality Approach." 34–58. In *Aging and Work in the 21st century*, edited by K. S. Shultz and G. A. Adams. New York: Psychology Press.

Wegman, David and James McGee. 2004. *Health and safety needs of older workers*. Washington, DC: National Academy Press.

Western, Bruce and Becky Pettit. 2005. "Black-White Wage Inequality, Employment Rates, and Incarceration." *American Journal of Sociology* 111(2):553–578.

Whiteford, Harvey A., Louisa Degenhardt, Jürgen Rehm, Amanda J. Baxter, Alize J. Ferrari, Holly E. Erskine, Fiona J. Charlson, et al. 2013. "Global Burden of Disease Attributable to Mental and Substance Use Disorders: Findings from the Global Burden of Disease Study 2010." *The Lancet* 382(9904):1575–1586.

Wilkinson, Lori. 2003. "Advancing a Perspective on the Intersections of Diversity: Challenges for Research and Social Policy." *Canadian Ethnic Studies* 35(3):26–38.

Williams, David R., Naomi Priest, and Norman Anderson. 2016. "Understanding Associations between Race, Socioeconomic Status, and Health: Patterns and Prospects." *Health Psychology* 35(4):407–411.

Williams, David R. 2012. "Miles to Go before We Sleep: Racial Inequities in Health." *Journal of Health and Social Behavior* 53:279–295.

Williams, David R., Harold Neighbors, and James Jackson. 2003. "Racial/Ethnic Discrimination and Health: Findings from Community Studies." *American Journal of Public Health* 93:200–208.

Wilson-Genderson, Maureen, Allison R. Heid, and Rachel Pruchno. 2017. "Onset of Multiple Chronic Conditions and Depressive Symptoms: A Life Events Perspective." *Innovation in Aging* 1(2):1–10.

Winship, Christopher and Larry Radbill. 1994. "Sampling Weights and Regression Analysis." *Sociological Methods and Research* 23(2): 230–257.