Article

Race-Ethnic Differences in the Effects of COVID-19 on the Work, Stress, and Financial Outcomes of Older Adults

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Abstract

Objectives: This study investigates race-ethnic differences among older non-Hispanic Black, non-Hispanic White, and Hispanic adults' financial, employment, and stress consequences of COVID-19.

Methods: We use data from the Health and Retirement Study, including the 2020 COVID-panel, to evaluate a sample of 2,929 adults using a combination of bivariate tests, OLS regression analysis, and moderation tests.

Results: Hispanic and non-Hispanic Black older adults experienced more financial hardships, higher levels of COVID-19 stress, and higher rates of job loss associated with COVID-19 relative to their Non-Hispanic White counterparts. Non-Hispanic Black and Hispanic adults reported significantly higher levels of COVID-19 resilience resources, yet, these resources were not protective of the consequences of COVID-19.

Discussion: Understanding how the experiences of managing and coping with COVID-19 stressors differ by race-ethnicity can better inform intervention design and support services.

Keywords

COVID-19, psychological resilience, financial, race, stress

In 2020, before national data collection on COVID-19 lifestyle outcomes, some social scientists argued that structural racism and racism over the life course would only exacerbate existing socio-economic vulnerabilities and lead to greater exposure to the virus for Black and Hispanic adults (Garcia, Homan, García, & Brown, 2021; Chatters et al., 2020). It was suggested that the virus would have a particularly detrimental impact on Black and Hispanic populations as they disproportionately experience higher rates of chronic disease with limited resources. Empirical evidence now supports those predictions that COVID-19 infection and associated deaths would be unequally distributed across racial groups (CDC 2022a). Yet, nearly 3 years after the start of the COVID-19 pandemic, we are just starting to understand the long-term effects of COVID-19 on the work, stress, and financial outcomes of older populations.

Burgeoning studies are examining the race-ethnic differences in COVID-19 for older adults. Garcia et al. (2022) note the effects of the economic recession that followed the pandemic as particularly devastating for Black and Hispanic older adults as minorized adult populations that already experience historical financial insecurity and COVID-19-related job loss. Taylor et al. (2022) explored similar measures of financial hardship and found detrimental financial impacts for Black and Hispanic older adults and explored nuanced findings on race-ethnic differences in psychological resilience as a coping resource. More researchers are exploring race-ethnic differences in COVID-19 as a psychological problem (e.g., stress, depression, coping, fear of exposure, loss of family and friends), as much as a medical or economic one (Choi et al., 2022; Lin & Liu, 2022; Taylor, 2022).

We are just beginning to understand how Black, White, and Hispanic older adults experience managing and coping with COVID-19. To inform intervention and identify support services that can ameliorate the health and well-being impact on Black and Hispanic older adults, our study is designed to evaluate consequences of COVID-19 with regard to financial hardship, stress, income, and job disruption, and how these differ by race-ethnic group. Further, we consider how these

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effects are influenced by pre-existing socio-economic and health vulnerabilities across groups, and differences in COVID-19-related resilience behaviors (i.e., tendency to recover quickly from times as difficult as COVID; learned positive things about self during COVID, found new ways to socially connect). Finally, we consider how COVID-19-related resilience behaviors differentially shape race-ethnic group associations with COVID-19 related outcomes. Based on these findings, we conclude with recommendations for addressing Black and Hispanic older adults' unique challenges related to COVID-19.

To address these study goals, we consider how racism over the life course operates as structural driver and analytic framework for the complexities and multilevel dynamics that explain the relationship between health status and stressful events in later life (Chatters et al., 2021; Bonilla-Silva 2006; Schulz et al., 2020). Understanding how racism shapes the life course (Gee et al, 2019) and how the combination of historical, cultural, institutional, and interpersonal norms creates race-based disparate conditions that not only put Black and Hispanic adults at social, political, and economic disadvantages prior to the global pandemic but also increase health risks as a result of the pandemic. These structural drivers highlight how institutional and systemic risks condition COVID-19 effects on health outcomes of White, Black and Hispanic older adults.

Background

Race-Ethnicity and COVID-19

COVID-19 infection and associated deaths are unequally distributed across age and race in the USA. Nearly 80% of the over 1 million associated deaths are adults over 65 years old (CDC 2022a). Of the 99 million cases reported, Hispanic Americans make up about 27.5% of infection rates and 18.6% of deaths (some estimate up to 34.4%), yet account for 18.5% of the population. Similarly, Black Americans make up 13.4% of the population and account for 30% of infection rates and 18.7% of deaths (CDC 2022a). According to the CDC (2022b), compared to White persons, Black and Hispanic persons have higher risks for COVID-19 related infection (1.1x and 1.5x), hospitalization (2.2x and 1.9x), and death (1.7x and 1.8x) due to their high rates of pre-metabolic health diseases, socio-economic vulnerabilities, and exposure to the virus due to higher rates of occupations that involve in-person interactions. White adults account for 76.3% of the US population and 51% of all COVID-19 cases. Along with lower COVID-19 rates, they report better health, overall. Only 14.1% of White adults are in fair or poor health compared to 17.3% of Hispanic and 20.0% of Black adults (CDC 2022b).

Further, Black and Hispanic adults are more likely to have less education and income than their White counterparts as they are overrepresented in low-wage service work such as personal care aides, cashiers, janitors, laborers, and retail salespersons (Ray et al., 2021). As essential workers, Black and Hispanic adults are at greater risk for exposure to SARS-CoV-2, the virus that causes COVID-19, since they work directly with the public, are not able to work from home, and do not have paid sick days (CDC 2020).

The health of an older adult is influenced by social determinants of health (SDOH) over the life course. SDOH are life, work, education, and leisure environments that people navigate that affect their health risks and outcomes (WHO 2008). They are the social, physical, and economic environments that influence well-being. Examples include geographic area and neighborhood, housing safety, job opportunities, socioeconomic status, and racism. For instance, SDOH shape an individual's engagement with healthcare, which in turn, has a greater impact on how they manage their health over time. Here we examine how racism over the life course and SDOH can help us understand race-based COVID-19 outcomes.

Racism Over the Life Course and Health

Racism over the life course operates as structural driver of COVID-19 inequities (Chatters et al., 2021; Schulz et al., 2020). Structural drivers are the combination of historical, cultural, institutional, and interpersonal norms that embody White supremacy and develop and maintain health inequities embedded in racist systems that culminate over the life course. These hierarchical social systems produce cumulative and adverse outcomes based on race and are infused in all aspects of society (Bonilla-Silva, 1997, 2006). These norms provide hidden, unearned, and institutionalized advantages to White people, while simultaneously legitimating the social, political, and economic disadvantages that non-White people experience through broad and interlocking systems (Gee et al., 2012; Gee & Ford., 2011). These processes are created and maintained at societal levels (e.g., poverty, residential segregation), but experienced at the interpersonal (discrimination, prejudice) and institutional level (e.g., education, judicial, healthcare systems).

Due to its penetrating nature, racism over the life course is experienced directly on an individual level through processes such as discrimination, xenophobia, and internalized privilege or oppression; but also, indirectly within and between institutions through unfair policies, opportunities, and practices that advantage or disadvantage people based largely in part by their race. All of these processes have health-related consequences such as stress, anxiety, depression, obesity, and chronic illness (Garcia et al. 2020; Gee and Ford 2011) and lead to "weathering"—a physiological decline leading to chronic morbidity, disability, and early mortality resulting from the cumulative effects of discrimination (Geronimus, 2001; Warner & Brown., 2011). These factors further explain how health is a byproduct of structural determinants (Satcher, 2010).

Structural determinants of health are embedded in racially stratified systems that reinforce disparate life outcomes. For Black and Hispanic older adults, this comes as the result of an accumulation of a lifetime of conditions—many of which began in childhood—and carried over into adulthood and later life that contribute to poor health and mortality (Hayward & Gorman., 2004). Racism over the life course oppresses Black and Hispanic communities. These include persistent historical policies that decrease access to healthcare, segregate housing, create school-to-prison pipeline educational systems, limit employment options, and increase engagement with the criminal justice system. These interconnected and institutionalized domains create environments that limit access to pathways of positive health outcomes and increase vulnerabilities related to COVID-19.

Psychological Resilience in Black and Hispanic Communities

Although a lack of personal and social resources exacerbates the impact of stressors on health (Thoits, 1984), access to factors that bolster resilience have been found to lessen the impact of general life stressors among older adults during the pandemic (Park et al., 2021). It has been theorized that access to psychological coping mechanisms and social support in particular reduce the negative effects of discrimination on mental health. Baldwin et al. (2011) and Heard et al. (2011) found that social support buffered the relationship between race-related stress and depressive symptoms. Community ties seem to serve as seminal pathways to psychological resilience. In fact, in a study of Black adults, Prelow et al. (2006) found that social support, measured by community relations such as guidance, reassurance of worth, social integration, attachment, and reliable alliance buffers the negative mental impact of discrimination (Nadimpalli et al., 2015). These studies note the importance of examining psychological resilience in association with adversities, such as during COVID-19.

Although overall rates were lower prior to the pandemic for Black and Hispanic older adults, using the HRS COVID module, Taylor et al. (2022) found that White adults experienced more erosion of psychological resilience than their Black and Hispanic counterparts in association with the financial consequences of the pandemic. Some studies have found that Black and Hispanic older adults place greater priority on family interdependence than personal autonomy where relationships and community values and practice strongly influence decision-making, coping mechanisms, and behaviors (Carr, 2011; Carr & Utz, 2020). These COVID-19 higher risk groups may have experienced more psychological resilience, in part, because they rely on personal and community resources, rather than external and government-based institutions. Similar to Anderson (2019), Taylor et al. (2022) and Jason (2022) call for the reconceptualization of resilience and warn against oversimplifying the concept of resilience as a cultural strength Black and Hispanic individuals and communities have that awards positive adaptation and coping and ignores structural drivers of inequities. This is the approach we take here.

The Current Paper

Based on a racism over the life course framework outlined above, this study is guided by four primary research questions:

Research Questions

1. How is race-ethnic group associated with COVID-19 outcomes (financial, employment, and stress-related) on older adults?
2. How did pre-existing socioeconomic and health vulnerabilities influence these associations?
3. How is race-ethnic group associated with COVID-related resilience behaviors?
4. How did these COVID-related resilience behaviors differentially influence race-ethnic group associations with COVID-19 outcomes?

Data and Methods

Data

Data for this study are drawn from the Health and Retirement Study, a US representative biennial longitudinal panel study of adults over age 50 and their spouses that began in 1992. Our sample is drawn from individuals who completed the 2020 study wave including the complete COVID module (n = 10,335). Several of our resilience resources and COVID-outcome measures were drawn from a special COVID-related supplement included in the psychosocial and lifestyle leave behind questionnaire in 2020 (LBQ). The LBQ is completed every 4 years on a rotating basis among half of the HRS respondents. About 4,500 of the COVID-panel respondents completed the LBQ in 2020. However, we only included individuals who completed the prior LBQ wave (2016) questions related to vulnerabilities prior to COVID-19, and we excluded individuals who were not age-eligible for the HRS at cohort entry (i.e., we did not include spousal respondents age 50 or younger in 2016), *and* we excluded individuals who identified as non-Hispanic and a race other than White or Black. This provided a total possible sample of 3,126 individuals. Among these, 164 did not complete one or more COVID-related resilience measures, and 33 did not have data for one or more demographic control measures. Based on these criteria, our final sample includes 2,929 of the original COVID-panel respondents. We use listwise deletion for our analyses.

Measures

Race-Ethnic Groups. We evaluated race and ethnicity based on two variables: self-reported race (options included White,

Black, or Other), and a measure for whether an individual identified their ethnicity as Hispanic. We created a combined measure of race and ethnicity coded: (1) White, (2) Black, and (3) Hispanic. Individuals identifying as "Other" were excluded from our analyses. Accordingly, Whites are Non-Hispanic Whites and Blacks are Non-Hispanic Blacks. For simplicity in language we chose to measure and code as "White" and "Black," as Hispanic was not reported as an associated ethnicity for these two groups.

COVID-Related Outcomes. *Number of Financial Hardships* during COVID was a count of financial hardships reported by respondents located in the COVID module. Specifically, respondents were asked: "Did you experience any of the following: (1) missed any regular payments on rent or mortgage, (2) missed any regular payments on credit cards or other debt, (3) missed any other regular payments such as utilities or insurance, (4) could not pay medical bills, (5) didn't have enough money to buy food, and (6) had trouble buying food even though had money." Based on sensitivity analyses, we combined both food measures whereby if individuals either did not have enough money or had trouble buying food they were coded as having a food hardship. Our measure is the count of hardships reported across the five domains (i.e., housing, debt, utilities, medical, and food).

COVID Stress was based on the total score associated with responses to five questions regarding respondents' worries related to COVID located in the 2020 LBQ. Specifically individuals were asked: On a scale from 0 to 10 where 0 is not at all worried and 10 means very worried, because of the coronavirus pandemic, how worried are you about: (1) your own health; (2) the health of others in your family; (3) your financial situation; (4) being able to get help if you needed it from family, friends, or others; and (5) what will happen in the future. Scores ranged from 0 to 50 ($\alpha = .86$). Given that this is a new measure created for this survey, we conducted factor analyses, evaluated alpha scores testing various combinations of these measures. The highest alpha scores included all measures and factor analyses showed that these items suggest one factor exists. Finally, we evaluated both a sum across the items and the average score across the five items. All results remained consistent regardless of measurement.

Income Declined During COVID was an indicator measure based on a question drawn from the COVID module: "Since the start of the coronavirus pandemic, has your income gone up or down or stayed about the same because of the pandemic?" This measure was coded "1" for those who indicated that income went down, and "0" otherwise.

Job Disruption was an indicator measure based on whether an individual indicated having to stop working as a result of the pandemic. Specifically, in the COVID module, respondents were first asked "Was your work affected because of the coronavirus pandemic?" Individuals who indicated having to stop work either permanently or temporarily were coded "1" and all others who were employed prior to the start of the pandemic but whose work was not influenced, were coded "0." For analyses predicting job disruption, we exclude the 775 individuals in our sample who indicated not being employed at the start of the pandemic.

COVID-Related Resilience Behaviors. We included five measures that captured COVID resilience behaviors. Individuals were asked to indicate how much they agreed with a series of statements whereby 1 = strongly disagree and 6 = strongly agree. The statements included: (1) I tend to recover quickly after difficult times like this one; (2) I have learnt some positive things from this situation about myself; (3) I found greater meaning in work or my other activities and hobbies; (4) I now feel more in touch with people in my local community; and (5) I found new ways to connect socially with other people. Each item was included separately to evaluate resilient responses to the pandemic.

Vulnerability Measures. We include *physical vulnerability* and *socioeconomic vulnerability* measures drawn from the 2016 HRS core data files. The physical vulnerability measures include three measures: (1) a count of heart and lung symptoms reported (i.e., swelling of feet and ankles, shortness of breath, dizziness, severe fatigue, and a persistent cough); (2) an indicator of whether the respondent has been diagnosed by a doctor with diabetes; and (3) an indicator of whether the respondent has been diagnosed by a doctor with high blood pressure.

Socioeconomic vulnerability was measured using two variables. The first is a measure of years of education that the respondent completed (range is 0–17) drawn from the core HRS data. The second was based on a question drawn from the 2016 LBQ: "How difficult is it for you/your family to meet monthly payments on your bills? Response options range from: 1 = not difficult at all, to 5 = completely difficulty.

Demographic Factors. Based on robust sensitivity analyses, we included four demographic statistical controls. First, we included "female" for those who identify as female "1," and "0" for male (non-binary gender options were not provided). Age was calculated as continuous chronological age in 2016. Married was measured both at baseline (2016) and again during the 2020 wave to capture marital transitions.

Analytic Approach. To address our research questions, we first evaluated the characteristics of our study sample, and characteristics by race-ethnic group. We conducted bivariate tests to identify differences in the characteristics of the sample by race-ethnic group (*t*-tests were used for continuous measures, chi-square tests for dichotomous measures), identifying differences across all race-ethnicity pairs (Table 1). Then, we used regression models to evaluate the association between all race-ethnic groups and each of our COVID-related outcomes (Table 2). We used OLS regression models to evaluate

Table 1. Descriptive Characteristics and Bivariate Analyses for Sample Race-Ethnic Groups.

	All (n = 2,929)		White (n = 2,051)		Black (n = 520)		Hispanic (n = 358)			
	M/P	SD	M/P	SD	M/P	SD	M/P	SD	Min	Max
COVID-related outcomes										
# Financial hardships during COVID	.31	.71	.21	.53	.59***	1.04	.50***	.87	0	5
Overall COVID stress	23.97	12.68	22.08	11.71	26.56***	13.91	31.05***#	13.01	0	50
Income declined during COVID	.13		.11		.14*		.24***#		0	1
Job disruption during COVID	.15		.11		.21***		.29***#		0	1
Race/Ethnicity										
White	.70								0	1
Black	.18								0	1
Hispanic	.12								0	1
COVID resilience Behaviors										
Recover from difficult times	4.70	1.21	4.73	1.14	4.63	1.27	4.63	1.43	1	6
Learned positive things about self	4.47	1.2	4.35	1.17	4.72***	1.24	4.80***	1.2	1	6
Found meaning in activities	4.13	1.36	4.02	1.33	4.30***	1.43	4.54***#	1.35	1	6
Feel more in touch with local community	3.39	1.46	3.25	1.4	3.66***	1.51	3.80***	1.63	1	6
Found new ways to connect socially	3.72	1.52	3.55	1.47	4.16***	1.5	4.03***	1.65	1	6
Physical Vulnerability										
Heart, lung symptoms	.71	1.11	.66	1.06	.88***	1.20	.80*	1.20	0	5
Diabetes	.27		.22		.37***		.39***		0	1
High blood pressure	.61		.57		.78***		.62*#		0	1
Socio-economic vulnerability										
Years of education	13.5	2.75	13.94	2.31	13.33***	2.54	11.18***#	3.92	0	17
Difficulty paying bills (2016)	1.93	1	1.79	.94	2.26***	1.06	2.29***	1.05	1	5
Demographic factors										
Female	.59		.58		.65**		.59		0	1
Age	70.19	9.66	71.47	9.86	67.40***	8.43	66.90***	8.48	52	97
Married (2016)	.60		.64		.44***		.62#		0	1
Married (2020)	.58		.62		.42***		.62#		0	1

Notes: M/P = Mean/Proportion. Asterixis (*) indicate significant difference relative to Whites: ***$p < .001$; **$p < .01$; *$p < .05$. Hashmark (#) indicates statistical differences between Black and Hispanic Individuals. Sample sizes for the Income Decline outcome measures are smaller because the sample is limited to those who were employed at the start of the pandemic only. Sample sizes are as follows: All (n = 2,154); Whites (n = 1,504); Blacks (n = 402); and Hispanics (n = 248).

continuous measures (i.e., financial hardships and COVID stress), and logistic regression models to evaluate dichotomous outcomes (i.e., decline in income and job disruption). Then we used OLS regression to evaluate associations between race-ethnic group and COVID-related resilience behaviors (Table 3). Finally, to more carefully evaluate our results, we produced figures based on calculated marginal effects for OLS measures and conducted difference tests to examine differences across race-ethnicity groups. Further, we conducted sensitivity tests to evaluate whether any resilience behaviors moderated the association between race and each outcome, using marginal effects to evaluate these interactions more carefully.

Results

To address our first research question, we first evaluated the characteristics of our study sample and differences by race-ethnic group in relation to our COVID outcomes (shown in Table 1). On average, our sample experienced .31 financial hardships. These individuals had an average stress score of 24, with 13% reporting a decline in income and 15% experiencing job disruption. Across all of these outcomes, racial disparities were evident. Specifically, Whites experienced an average of .21 financial hardships, and both Blacks (.59; $p < .001$) and Hispanics (.48; $p < .001$) experienced significantly more hardships. Similarly, Whites experienced an average stress score of 22, and both Blacks (26.6; $p < .001$) and Hispanics (31.1; $p < .001$) reported higher average stress. Only 11% of Whites experienced a decline in income, with both Blacks (14%; $p < .05$) and Hispanics (24%; $p < .001$) experiencing significantly higher rates. Finally, 11% of Whites experienced job disruption, whereas 21% of Blacks ($p < .001$) and 29% of Hispanics ($p < .001$) experience a job disruption. For all outcomes except financial hardships, Hispanics had a statistically higher score relative to Blacks.

Key reasons for racial disparities in COVID outcomes may relate to pre-existing physical and socio-economic vulnerabilities.

Table 2. OLS and Logistic Regression Results Predicting COVID-Related Outcomes.

	OLS regression models (displaying coefficients)						Logistic regression models (displaying odds ratios)					
	Number of Financial Hardships During COVID			Overall COVID Stress Score			Income Declined During COVID			Experienced Major Job Disruption/Loss During COVID		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Race/Ethnicity group												
Black	.32***	.24***	.24***	3.68***	1.96**	1.85**	1.03	1.04	.99	1.65**	1.56**	1.45*
	(.05)	(.04)	(.05)	(.68)	(.68)	(.66)	(.15)	(.16)	(.16)	(.26)	(.25)	(.24)
Hispanic	.27***	.18***	.18***	8.54***#	6.15***#	5.93***#	2.07***#	2.23***#	2.14***#	2.58***#	2.34***#	2.13***#
	(.05)	(.05)	(.05)	(.74)	(.76)	(.76)	(.29)	(.34)	(.33)	(.44)	(.42)	(.39)
COVID resilience behaviors												
Recover from difficult times			−.03*			−2.84***			.96			1.01
			(.01)			(.21)			(.05)			(.06)
Learned positive things about self			.01			.17			1.12+			1.03
			(.01)			(.25)			(.08)			(.08)
Found meaning in activities			−.01			.62**			1.06			1.19*
			(.01)			(.22)			(.06)			(.08)
Feel more in touch with local community			.00			−.49*			.83***			.89*
			(.01)			(.20)			(.04)			(.05)
Found new ways to connect socially			−.00			.24			1.12*			1.09
			(.01)			(.19)			(.06)			(.06)
Pre-Ex. Metabolic conditions												
Heart/Lung symptoms		.06***	.05***		.99***	.88***		.93	.93		.87*	.89+
		(.01)	(.01)		(.22)	(.21)		(.05)	(.06)		(.06)	(.06)
Diabetes		.03	.03		1.61**	1.53**		1.06	1.07		.82	.84
		(.03)	(.03)		(.53)	(.52)		(.14)	(.14)		(.12)	(.13)
High Bl. Pressure		.03	.03		.91+	.53		.82	.82		1.08	1.10
		(.03)	(.03)		(.48)	(.45)		(.10)	(.10)		(.15)	(.15)
SES factors												
Yrs of education		.00	.00		−.22*	−.22*		1.06*	1.04+		.98	.97
		(.01)	(.01)		(.09)	(.09)		(.02)	(.02)		(.02)	(.02)
Diff paying bills		.16***	.16***		2.78***	2.40***		1.23***	1.22***		1.26***	1.26***
		(.02)	(.02)		(.26)	(.25)		(.07)	(.07)		(.08)	(.08)
Dem factors												
Female	−.00	−.01	−.01	.99*	1.03*	.58	.76*	.76*	.71**	.98	1.02	.95
	(.03)	(.03)	(.03)	(.46)	(.45)	(.45)	(.09)	(.09)	(.08)	(.12)	(.13)	(.12)
Age	−.01***	−.00***	−.00***	−.09***	−.06**	−.06*	.94***	.94***	.95***	.95***	.95***	.95***
	(.00)	(.00)	(.00)	(.02)	(.02)	(.02)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Married (2016)	−.05	−.03	−.03	−1.16	−.68	−.59	1.34	1.30	1.30	.94	.91	.94
	(.06)	(.06)	(.05)	(1.16)	(1.13)	(1.08)	(.34)	(.34)	(.34)	(.34)	(.33)	(.34)
Married (2020)	−.13*	−.08	−.08	−.70	.24	.12	.58*	.62+	.61+	.70	.77	.73
	(.06)	(.06)	(.05)	(1.15)	(1.12)	(1.07)	(.15)	(.16)	(.16)	(.25)	(.28)	(.26)
Constant	.83***	.26+	.37*	28.97***	23.05***	34.77***	15.98***	3.36+	2.54	7.14***	4.97*	2.20
	(.11)	(.14)	(.17)	(1.85)	(2.51)	(2.66)	(7.28)	(2.16)	(1.81)	(3.54)	(3.47)	(1.71)
R-squared	.07	.14	.14	.07	.15	.21						

Notes: Reference group is Whites. Outcomes three and four are based on logistic regression models and present odds ratios, all others are based on OLS regression and present coefficients. Robust confidence intervals are provided in parentheses below the predicted values. Significance indicates differences relative to Whites: ***$p < .001$; **$p < .01$; *$p < .05$. Hashmark (#) indicates statistical differences between Black and Hispanic Individuals

Regarding physical vulnerabilities, Blacks and Hispanics reported statistically higher heart and lung symptoms, higher proportions with diabetes, and Blacks had a higher proportion with high blood pressure. Similarly, Blacks and Hispanics both reported lower levels of educational attainment, and a higher difficulty paying bills in 2016.

To evaluate our second research question, we used regression models (Table 2). First, we regressed each of the COVID outcomes on race-ethnic group net of demographic control measures. Results indicate that net of demographic controls, relative to their White counterparts, Blacks and Hispanics both show higher associations with financial hardships, COVID stress, and job disruption. Only Hispanics show higher associations with decline in income relative to Whites. Although effect sizes decreased, the overall results were unchanged even after taking into consideration pre-existing socioeconomic and health vulnerabilities. That is, on the whole, accounting for pre-existing vulnerabilities did not influence these associations.

To address our third research question, we evaluated differences in COVID-related resilience behaviors by race-ethnic group. First, we evaluated descriptive differences regarding resilience resources. Table 1 shows that except for agreement to the statement "I tend to recover quickly after difficult times like this one" for which all race-ethnic groups had similar scores, Blacks and Hispanics had higher scores across all other items relative to their White counterparts ($p < .001$), with Hispanics having the highest scores (statistically higher than Blacks) regarding the item related to finding meaning in their daily activities. To further evaluate these associations, we used OLS regression to examine the association between race-ethnic groups and resilience resources (Table 3). Here, even after controlling for all other factors, we observe the same effects as those observed in the descriptive table, whereby being Black and Hispanic is associated with higher scores on each of the COVID-related resilience behavior measures relative to Whites, except for the measure associated with recovering quickly after difficult times like this one."

Table 3. Summary of Regression Results Predicting COVID-Related Resilience Behaviors.

	Recover from Difficult Times	Learned Positive Things About Self	Found Meaning in Activities	Feel More in Touch with Local Community	Found New Ways to Connect Socially
Race/Ethnicity Group					
Black	.02	.35***	.30***	.45***	.64***
	(.06)	(.06)	(.07)	(.08)	(.08)
Hispanic	.02	.48***	.55***#	.54***	.56***
	(.08)	(.07)	(.08)	(.10)	(.10)
Pre-Ex. Metabolic conditions					
Heart/Lung symptoms	−.06**	−.04	−.10***	−.06*	−.11***
	(.02)	(.02)	(.03)	(.03)	(.03)
Diabetes	−.02	.02	.02	−.02	.00
	(.05)	(.05)	(.06)	(.06)	(.06)
High Bl. Pressure	−.14**	−.03	−.06	−.09	−.09
	(.05)	(.05)	(.06)	(.06)	(.06)
SES factors					
Yrs of education	.01	.02*	.02	−.02*	.03**
	(.01)	(.01)	(.01)	(.01)	(.01)
Diff paying bills	−.13***	−.04	−.00	−.06+	−.05+
	(.03)	(.03)	(.03)	(.03)	(.03)
Dem factors					
Female	−.06	.15***	.27***	.00	.30***
	(.05)	(.05)	(.05)	(.06)	(.06)
Age	−.00	−.01**	−.00	.00	−.01***
	(.00)	(.00)	(.00)	(.00)	(.00)
Married (2016)	.03	−.23*	−.14	−.29*	−.10
	(.11)	(.11)	(.13)	(.14)	(.15)
Married (2020)	−.02	.15	.19	.20	.11
	(.10)	(.11)	(.13)	(.14)	(.15)
Constant	4.99***	4.65***	4.02***	3.66***	3.89***
	(.25)	(.24)	(.29)	(.30)	(.30)
R-squared	.03	.04	.04	.03	.06

Notes: Reference group are Whites. Outcomes three and four are based on logistic regression models and present odds ratios, all others are based on OLS regression and present coefficients. Robust confidence intervals are provided in parentheses below the predicted values. Significance indicates differences relative to Whites: ***$p < .001$; **$p < .01$; *$p < .05$. Hashmark (#) indicates statistical differences between Black and Hispanic Individuals

To evaluate, question four, how COVID-related resilience behaviors differentially influence race-ethnic group associations, we evaluated how inclusion of these resilience measures influenced our models predicting each of the COVID-related outcomes (Table 2, Model 3). Despite indicating higher COVID-related resilience behaviors in general, inclusion of these resilience measures did not influence the extent to which Blacks and Hispanics disproportionately experienced worse consequences associated with COVID relative to their White counterparts. Not only did the inclusion of the resilience measures in the final model not explain the significant associations between race-ethnic group and each of the four outcomes (i.e., resilience did not mediate the association), moderation tests (not shown, but available upon request) indicated that resilience behaviors also did not significantly moderate, or buffer, the association between race and each COVID-related outcome. Based on these final models that account for COVID-related resilience behaviors, we provide figures that display the predicted standardized measures for our continuous outcomes (i.e., financial hardships and COVID stress) in Figure 1 based on marginal effects calculations and difference tests. For our dichotomous outcomes (i.e., decline in income associated with COVID and job disruption), we provide the difference in odds relative to Whites in Figure 2.

Discussion

The goal of this study was to capture if, and to what extent, race-ethnicity differentially shaped the financial, employment, and stress-related effects of COVID-19 on older adults and how pre-existing vulnerabilities influenced these outcomes. We also explored resilient behaviors that older adults engaged in during COVID-19 and how these resilient behaviors influenced COVID-19-related effects. Overall, findings reveal the pernicious effects of COVID-19 on all groups, but demonstrate especially deleterious health and financial outcomes for Black and Hispanic older adults. Specifically, we found that Black and Hispanic adults experienced higher incidence of COVID-19 related effects and higher levels of resilient responses to COVID-19, but that these resilient responses were not protective against COVID-19 outcomes.

As racialized minorities, Black and Hispanic populations experienced higher levels of COVID-19 consequences owing to documented disadvantaged circumstances that Black and Hispanic groups experience in terms of labor market position, neighborhood circumstances, economic factors, and documented physical vulnerabilities. However, it is revealing that Black and Hispanic older adults demonstrated resilience through psychological stability and growth as a result of the pandemic, while White adults did not. Learning positive things about self, finding greater meaning and improved relationships with family, friends, and the community were associated with decreased negative impacts of COVID-19, even taking into consideration previous vulnerabilities, including trouble paying bills and preexisting metabolic conditions prior to the pandemic. However, at the same time, these resilient behaviors during COVID-19 did not buffer stress for these groups. The buffering effects of resilience have been shown in prior research on race, workability, and disability (Taylor et al., 2022; Jason et al., 2017). Nevertheless, resilient behaviors did not, in this instance, counter the very significant impacts of COVID-19.

White older adults reported more financial stability and fewer preexisting metabolic conditions prior to the pandemic. They did not experience similar negative impacts to their income, employment, and stress as their Black and Hispanic counterparts did. This can be explained, in part, by lower life course risks of socioeconomic and health vulnerabilities in later life. Although White adults were not protected from the impacts of COVID-19, they were not subject to the same life course effects of structural racism, which appears to have allowed for less damaging impacts of COVID-19, including less psychological harm and financial losses. However, White older adults also did not lean into their local community, and connect with others in the way as Blacks and Hispanics. Black and Hispanic older adults showed *deepening* of their connections to their social networks, even as other resources dwindled around them. It is important to note that prior to COVID-19, Black Americans had higher rates of relationship loss due to higher rates of mortality than White Americans (Umberson, 2017). Umberson (2017) argued that close relationships are a social resource that when lost, lead to stress and disadvantages in health. Verdery et al. (2020) estimate that every COVID-19 death will leave nine people bereaved. For our study, this may mean that Black (and possibility Hispanic) older adults had to dig deeper in to smaller social networks than their White counterparts.

Theoretical Implications

Racism over the life course means that Black and Hispanic older adults experienced a lifetime of interpersonal, institutional, and societal-wide racial inequities that lead to disparate life outcomes including poorer well-being and health and increased disability and mortality. For example, fewer opportunities in education, employment, healthcare access, increased risks of incarceration, divorce, and chronic illness, are all the result of residential segregation and government-aided disenfranchisement. These, often inescapable, racialized inequalities foster White adults' notions of individualized success through merit and hard work, while crippling the ability of many Blacks and Hispanics to secure viable work, health, and living arrangements. This study demonstrated how, in general, White older adults responded to the compounding effects of a global pandemic by leaning inward towards their personal assets and resources. They were able to accumulate these reserves prior to the pandemic and protect them during it. Black and Hispanic older adults, who had less employment and income security prior to the pandemic, did not have institutional viability during it, and

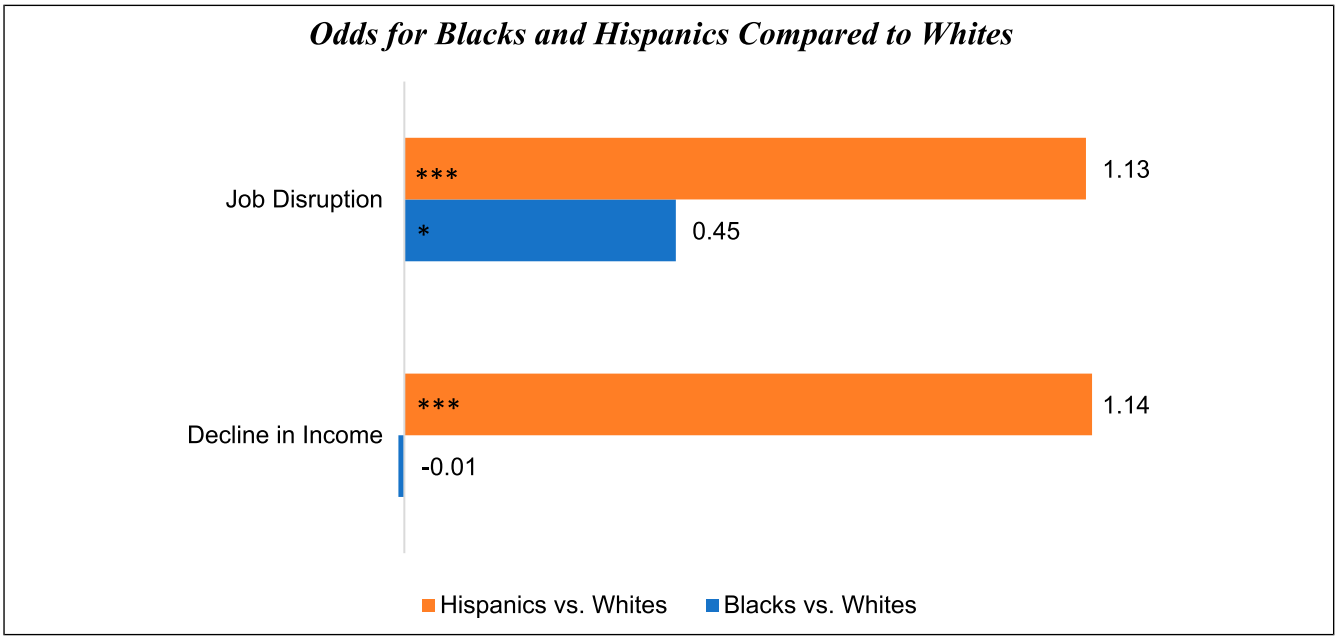

Figure 1. Odds for Blacks and Hispanics compared to Whites. Notes: Figure presents relative odds relative to Whites based on Model 3 for each outcome provided in Table 2. Statistical significance indicates significant difference relative to Whites. Higher values indicate odds higher relative to Whites, negative values indicate lower odds relative to Whites accounting for all other factors: $^{***}p<0.001$; $^{**}p<0.01$; $^{*}p<0.05$. As shown in Table 2, odds for Hispanics for both Job Disruption and Decline in income are higher for Hispanics relative to Blacks.

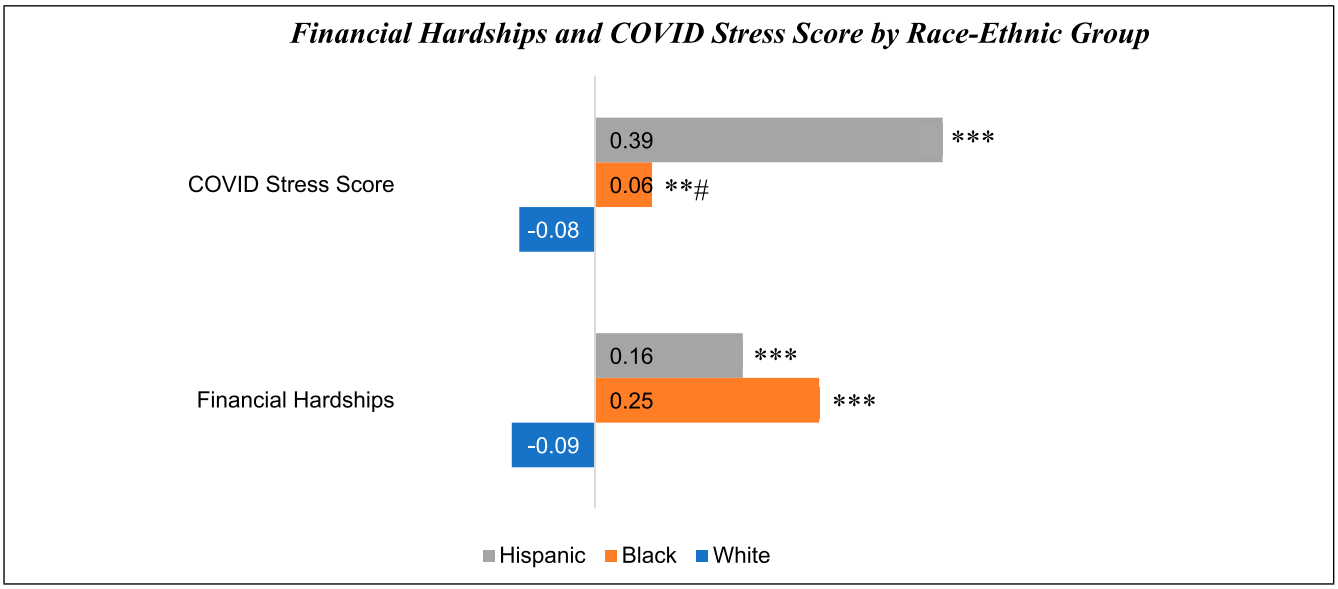

Figure 2. Financial hardships and COVID stress score by race-ethnic group. Notes: Figure presents predicted values for each outcome based on Model three in Table 2. Values are mean-centered. Statistical significance indicates significant difference relative to Whites accounting for all other factors: $^{***}p < .001$; $^{**}p < .01$. The # indicates a statistically significant difference between Hispanic and Black estimates regarding the predicted COVID Stress Score (as shown in Table 2, model 3). There are no statistical differences in the predicted number of Financial Hardships for Blacks relative to Hispanics.

suffered significant income and job disruption as well as increased stress.

Black and Hispanic older adults fared better when it comes to resilient behaviors under such dire circumstances. This study's exploration of resilient behaviors, as measured by tendency to recover in extremely difficult life situations, self-reflection and finding meaning during adversity, and finding new ways to connect with others, demonstrated that Black and

Hispanic older adults are not only deeply embedded in community ties (Gerstel 2011) but also self-aware and find ways to stabilize and grow from life shocks. White adults, on the other hand, lean into self-reliance, financial assets, independence, and nuclear family structures (see Jones & Okun, 2001). This could help explain why Black and Hispanics' positive outcomes of the pandemic were psychological, while Whites suffered in this area. In short, using a racism over the life course framework allows one to better understand why Black and Hispanic older adults may depend less on external and government-based institutions as sources for psychological support as these institutions may be viewed as systemically racist, leading them to depend more on personal and community resources that bolster psychological resilience. Their White counterparts who benefit from structural racism, on the other hand, could rely on protective factors provided by these same institutions to buffer their financial supports.

Limitations

There are several limitations of the study that should be considered when interpreting our findings. This study uses data collected only during the first year of the pandemic. A 2021 COVID-19 supplementary mailout survey was fielded in August 2021 and, at the time of this writing, is not publicly available but may provide additional insights beyond those provided in the current paper. Future research should extend the findings here with additional data, once available. Second, we are also unable to account for the large number of older adults that voluntarily or involuntarily left the labor market due to severe health-related issues or to protect themselves from exposure to COVID-19. Although we account for stress and all resilience behaviors, future research should examine the connections between social networks, stress, and health outcomes, as informed by the stress process model. Third, our measurement of resilience resources excludes strategies related to personal coping, which could lead to additional weathering (i.e., John Henryism), which has been shown to be prevalent in the Black community (e.g., Hudson et al., 2016; James, 1994). Future research should consider whether coping strategies played a beneficial role for this group during the pandemic. Fourth, future research should evaluate financial support data such as state, federal, and regional welfare programs that may play a key role in influencing resilience resources and financial coping by providing structural supports for particularly vulnerable older adults who are disproportionately Hispanic and Black. Fifth, job loss and subsequent financial consequences may relate to differences in the type of work that individuals are engaged in, which could be related to race-ethnicity related occupational segregation such that Blacks and Hispanics were more at risk of job loss due to differences in the type of work they are engaged in. Future research should explore the role of occupational segregation in shaping responses to major stressors like the pandemic.

Finally, although, not explicitly examined here, we encourage the consideration of Black and Hispanic culture and cultural influences as explanatory factors for their health outcomes in future research. Viruell-Fuentes et al. (2012) warn researchers about the shortcomings of cultural explanations for health outcomes, arguing that structural factors have a stronger health impact. Our study findings support these concerns. Assuming culture alone will be protective promotes victim-blaming, stereotypes, and essentializing and homogenizing entire ethnic groups (Hunt et al., 2004; Viruell-Fuentes, 2011). We argue, however, that the role of culture should be evaluated *within the context of social forces*, institutions, systems, and other structural explanations. Using a racism over the life course framework considers how the agency of individuals are shaped by communities and the overarching structural forces that shape attitudes, behaviors, and health outcomes.

Implications and Conclusion

Despite these limitations, this research has important implications. This study is among the first to explicitly evaluate comprehensive race and ethnic group differences regarding outcomes to the COVID-19 pandemic. Given our findings, there is reason to raise concerns regarding the fact that even though Blacks and Hispanics utilize resources in spite of a significant global stressor that disproportionately influenced their lives, these resiliency behaviors were insufficient to counter the effects of the existing structures that perpetuate inequalities for these groups. These results from this study can inform the design of public and health policies, showing that we cannot simply promote resilient responses to stressors alone. For example, the findings suggest that broadening health care coverage could have significant benefits for navigating major stressors like a pandemic. Race disparities like those observed during COVID-19 cannot be ameliorated until Blacks and Hispanics have equal opportunities for financial, educational, health, and social network resources over the life course.

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