



Entangled Inequalities: U.S. Trends in Self-Rated Health at the Intersection of Gender and Race, 1972–2018

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Abstract

This study provides a systematic assessment of U.S. differentials in self-rated health over the past five decades (1972–2018) at the intersection of race and gender (i.e., White men, White women, Black men, Black women). In so doing, we provide new evidence regarding racial and gender dynamics in well-being since the civil rights and women’s rights legislations of the 1960s/1970s. We find that self-rated health differentials are converging. Black women experienced a discernable pattern of improvement. In contrast, Black men encountered a variable trend, experiencing self-rated health gains in some decades (i.e., 1990s and 2010s) although experiencing an intermittent reversal of previous gains during the pre-Obama/recession years (i.e., 2000s). While White women experienced self-rated health gains between the 1970s and 2000s, White men experienced little to no change in their health status across the first four decades of the survey. After the economic downturn (2010–2018), however, self-rated health gains among White women diminished, while White men encountered an unparalleled pattern of decline. Our findings contribute to a growing body of work in the United States indicating rapid declines in well-being across a broad range of social indicators of quality of life post-recession. Our findings also closely parallel scholarly work highlighting the well-documented declines in life expectancy and increases in “Deaths of Despair” that have disproportionately and adversely affected the White American (male) population in recent years.

Keywords Self-rated health · Well-being · Race · Gender · Inequalities · United States · Intersectionality

1 Introduction

A major challenge that confronts social scientists and policy makers is gauging the scope of disparities in health and well-being and understanding the social forces that shape them. National data reveal that as U.S. life expectancy continued to improve over the last forty years, racial and gender disparities in health and mortality stubbornly persist and, in many

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cases, have increased (Levine et al., 2001; Taylor & Braithwaite, 2001; Read and Gorman 2006; Williams & Collins, 1995; Williams & Jackson, 2005).

Previous work on trends in self-rated health also highlight poorer health among African Americans (compared to their White peers) but underscore some reductions in the Black-White gap in self-rated health between the 1970s and early-2000s (see Coverdill et al., 2011; Cummings & Jackson, 2008; Hughes & Thomas, 1998; Yang & Lee, 2009). In contrast, research on persistence and change in the Male-Female gap in self-rated health established that women as a group gained significant ground in their well-being since the 1970s (Hughes & Thomas, 1998; Schnitker, 2007), with self-rated health disparities (1974–2004) narrowing in magnitude in the 1970s through 1980s, reaching parity by the early-2000s (Schnitker, 2007).

More recent work across multiple data sources, reveal rapid declines in social indicators of quality of life such as self-rated health (Beck et al., 2014; Case & Deaton, 2015) and other general indicators of subjective well-being like happiness (Cummings, 2020; Easterlin, 2015), worry, stress, and pain (Deaton, 2012) since the 2007–2009 U.S. Great Recession. These declines in well-being occurred alongside deteriorating patterns in U.S. life expectancy since 2010 (Ho & Hendi, 2018; Woolf et al., 2018). A pattern that is largely driven by what Case and Deaton (2020) have called “Deaths of Despair” or well-documented increases in preventable conditions like suicide mortality, and opioid-alcohol overdose that have disproportionately and adversely affected middle age Americans, but particularly middle age (30–64) White Americans—leading to a decrease in White life expectancy over the past several years (Case & Deaton, 2015; Hansen & Netherland, 2016; Stone et al., 2018; Woolf et al., 2018). Some of these deteriorating health patterns emerged in the early-2000s (Case & Deaton, 2015), but have experienced a pattern of accelerated decline since the 2007–2009 U.S. Great Recession (Hansen & Netherland, 2016; Stone et al., 2018; Woolf et al., 2018) and have begun to spill over into other racial and ethnic groups (including Black Americans) in recent years (Case and Deaton 2020; Woolf et al., 2018). While these studies have advanced our knowledge regarding patterns and trends in self-rated health overtime, they are in part limited, because they have paid scant attention to the extent to which racial disparities in health vary by gender and other social factors.

Two focal questions motivate this study. First, focusing our attention on self-rated health differentials at the intersection of gender and race: *What is the pattern of racial and gender disparities in self-rated health from 1972–2018?* and second, *have racial and gender disparities in self-rated health from 1972–2018 decreased, increased, or remained unchanged?* In answering these questions, this paper builds on previous research by providing an update of past work on temporal patterns in self-rated health. To our knowledge, no study has examined changes in racial-gender differentials in self-rated health prior to, during, and after the U.S. Great Recession.

2 Theoretical Perspective

The intersectionality paradigm was first introduced by Black feminist scholars in the 1980s as a critique of mainstream social analyses that overwhelmingly focused on a single dimension or system of stratification (e.g., racism, sexism, classism) while overlooking the degree to which these identities and larger macro-systems overlap and intersect, representing powerful axes of inequality that structure opportunities and access to resources (Collins, 2000; Crenshaw 1990; McCall, 2005) that are consequential for exposure and vulnerability to

various health risks and their consequences (Bowleg, 2012; Cummings, 2020; Cummings & Jackson, 2008; Ford & Airhihenbuwa, 2010; Weber and Parra-Medina 2003).

Contemporary intersectional work is typically guided by at least three core tenets. *First*, individual experience cannot be reduced to a single status characteristic or identity (e.g., race). On the contrary human experience is multiplicative (compounding) or intersectional (e.g., young, black male, high school diploma). *Second*, social identities such as race, class, gender, sexuality intersect at the micro-level of individual experience while also reflecting larger historically constructed, mutually reinforcing dynamic macro-level interlocking systems of inequality (e.g., racism, classism, sexism, homophobia)—that constitute a matrix of domination or multiple intersecting oppressions (Collins, 2000). Accordingly, these “broader historical systems of dominance (and privilege) and their sedimentation (or embeddedness) in social institutions...shape and constrain opportunities, access to resources, life chances and well-being” (Cummings, 2020, pgs. 711–712). Finally, intersectional theorists encourage scholars to shift the starting point of their research from a majority group perspective (i.e., focusing on the health/well-being of Whites or White men as the central axis of exploration (and most appropriate point of reference), to a marginalized group perspective, that privileges heterogeneity (within group variation) over deviation; making central the unique well-being patterns of historically marginalized groups (Bowleg, 2012; Ford & Airhihenbuwa, 2010; Weber & Parra-Medina, 2003). Building on the third core tenet of intersectionality, Leslie McCall (2005) proposes two quantitative applications to intersectionality that we use here: (1) *intracategorical complexity* or within group trends at the intersection of gender and race (e.g., Black women, Black men, White women, White men) and (2) *intercategorical complexity* or assessing the changing pattern of inequality across groups. In this paper, we apply both approaches; simultaneously assessing the shape and magnitude of self-rated health inequalities over the last five decades within *and* across race and gender. In so doing, we fill an important intellectual gap in our knowledge regarding a much studied social indicator of well-being (self-rated health).

3 Methods

Study Population. The General Social Survey (GSS) is a nationally representative (full probability) sample of the U.S. adult civilian non-institutionalized population (18+) conducted by the National Opinion Research Center (NORC) on a nearly annual basis (1972–2018). On average, the sample size for each year is approximately 1,500. Apart from three years (1978, 1983, 1986), when the self-rated health measure was not asked.¹ Finally, we restrict the sample to Blacks and Whites, because the sample size of all other racial groups was too small to allow any substantive conclusions.

Study variables. Self-rated health is measured by asking respondents “Would you say that your own health, in general, is (1) poor, (2) fair, (3) good, or (4) excellent?” self-rated health is a valid and reliable measure and an excellent proxy of morbidity, overall health status and a good predictor of mortality later in life (Chandola & Jenkinson, 2000;

¹ Due to budget constraints the National Opinion Research Center began to survey respondents every other year (even years) beginning in 2000. The U.S. Great Recession officially lasted from December 2007 to June 2009, followed by a slow recovery (Hoyne, Miller and Schaller 2012). Given the survey year structure after 2000, pre-recession is defined as years prior to 2006 and post-recession/recovery is operationalized as 2010–2018.

Mirowsky & Ross, 1995; Mossey & Shapiro, 1982). *Independent Variables*. Race and gender are measured with four dummy variables that capture the dual status of race and gender (Black men, Black women, White men, and White women). We measured time in decades (i.e., 1970s, 1980s, 1990s, 2000s, 2010s). To adjust for changes in self-rated health over time, we control for three broad social factors or domains of social life: family life or marital status (*never-married, separated, widowed, divorced, married*), work and occupations including *occupational prestige* and labor force status² (*full-time, part-time, retired, in school, keep house, vacation/illness, other, and unemployed*), and socioeconomic attainment which includes *household income (logged)* and educational attainment (*less than high school, high school, college degree*). These three broad factors or some subset of these factors represent key social determinants of health status used in past research on trends in self-rated health (Coverdill, Lopez, Petrie 2011; Cummings & Jackson, 2008; Hughes & Thomas, 1998). Finally, *church attendance* (on a nine-point scale ranging from: 0 = never to 8 = more than once a week), age (*18–34, 35–64, 65 and older*), region (*north, midwest, west, south*) and urbanicity (*suburban, urban, rural*) were additional control variables. Descriptive statistics for all variables are available in Table 1.

Statistical Analysis. We use ordered logistic regression (OLRM) to analyze the outcome of interest. The ordered logistic regression model is an extension of the binary logistic model and is used to estimate the central tendency of categorical dependent variables (Long & Freese, 2006) assuming proportional odds or that the effects (slope coefficients) of the explanatory variables of interest are roughly “proportional” across outcome category thresholds (i.e., self-rated health: excellent, good, fair, poor). After formally testing the proportional odds assumption with a Brant test in STATA, it was found that the parallel regression assumption was violated. In cases where the assumption is violated, it is generally recommended to: (1) test/adopt alternative regression models that do not impose the constraint of parallel regressions and/or (2) compute predicted probabilities across each outcome category (i.e., excellent, good, fair, poor) which circumvents the parallel regression assumption by allowing both covariate and point estimates across outcome categories to vary independently (Long & Freese, 2006). Both strategies were employed in this study. The patterns presented here do not substantively vary depending on the regression model used (e.g., logistic, stereotype, generalized ordered logit, multinomial).³ We also compute predicted probabilities of each outcome group (i.e., self-rated health: excellent, good, fair,

² Consistent with the Bureau of Labor Statistics, the General Social Survey labor force status sub-category groups “retired,” “in school,” “keep house” and “other” all represent respondents who are economically inactive and/or not seeking work. “Full-time,” “part-time” and employed person who were temporarily/briefly not working because of “vacation/illness” all represented respondents who were currently in the labor force. In contrast, “unemployed” represented respondents who were laid off and/or currently looking for work. Finally, “other” reflected an “other-specified” group of economically inactive persons who were not retired, in school or keeping house that could not be further distinguished in the public GSS data to protect the anonymity of survey respondents. Per email discussions with representatives from the General Social Survey, respondents who identified as “other” were primarily persons who indicated that they were disabled or on social security disability (and not seeking work), but occasionally included other responses that reflected economic inactivity not reflected in the other available labor force status response options. Each labor force status category was mutually exclusive. If a respondent reported that they were “in school,” but also worked “part-time” for example, GSS appropriately coded this respondent as working “part-time” in the original coding scheme.

³ In the few cases, where results differ, we outline these differences in Figs. 1 through 4 where group specific predicted probabilities are presented across self-rated health outcome categories (i.e., poor, fair, good, excellent) over time.

Table 1 Summary of coding of dependent and independent variables: General Social Survey, 1972–2018

Variable name	Description	Mean	SD
Self-rated health	Would you say your own health in general is, Excellent = 4; Good = 3; Fair = 2; Poor = 1	2.99	0.85
Poor	Poor = 1	0.06	0.23
Fair	Fair = 1	0.19	0.39
Good	Good = 1	0.45	0.50
Excellent	Excellent = 1	0.30	0.46
<i>Independent variables</i>			
SES attainment			
High school (Reference)	High school = 1	0.31	0.46
Less than high school	Less than high school = 1	0.23	0.42
Some college	Some college = 1	0.24	0.42
College	College = 1	0.23	0.42
Income (Logged)	Household income (Logged)	10.76	1.02
Family life			
Married (Reference)	Married = 1	0.53	0.50
Never married	Never married = 1	0.20	0.40
Divorced	Divorced = 1	0.13	0.33
Separated	Separated = 1	0.03	0.18
Widowed	Widowed = 1	0.10	0.30
Labor force status			
Unemployed (Reference)	Unemployed = 1	0.03	0.18
Full-time	Full Time = 1	0.48	0.50
Part-time	Part Time = 1	0.10	0.30
Retired	Retired = 1	0.15	0.36
In school	In School = 1	0.03	0.17
Keep house	Keep House = 1	0.16	0.37
Vacation/Illness	Vacation/Illness = 1	0.02	0.14
Other	Other = 1	0.02	0.14
Occupational prestige	Measure of occupational prestige (Range: 12–86)	42.30	12.69
Other variables			
Age of respondent			
35–64 (Reference)	35–64 = 1 (middle-aged adults)	0.50	0.50
18–34	18–34 = 1 (younger adults)	0.31	0.46
65 or older	65+ = 1 (older adults)	0.19	0.39
Decades	1970s (Reference), 1980s, 1990s, 2000s, 2010s		
Attendance	Frequency of church attendance (Range: 0 = Never to 8 = More than Once a Week)	3.80	2.73
Region			
South (Reference)	South = 1	0.36	0.48
Midwest	Midwest = 1	0.27	0.44
North	North = 1	0.20	0.40
West	West = 1	0.18	0.38
Urbanicity			
Rural (Reference)	Rural = 1	0.26	0.44
Suburban	Suburban = 1	0.30	0.46
Urban	Urban = 1	0.44	0.50

poor) to facilitate the interpretation of the location and magnitude of effects across the self-rated health outcome. Predicted probabilities represent average marginal effects (AMEs) or discrete change in each outcome group over time (e.g., excellent health) when all other independent variable set to the same value as observed in the data.⁴ To avoid unnecessary data loss that may lead to biased estimates, about 5,000 missing values (mostly on income) were imputed using the MI command suite in STATA where single parameter estimates were drawn from five (5) multiply imputed datasets. Finally, sampling weights were used to adjust for the survey design and oversample of Blacks in 1982 and 1987.

4 Results

What is the pattern of racial and gender disparities in self-rated health from 1972–2018? We begin to address the first question by presenting a series of ordered logistic regression models predicting the central tendencies in self-rated health over the last forty years by gender and race (Table 2). We estimate race/gender specific group trends to assess the extent to which White men, White women, Black men, and Black woman have experienced absolute changes in self-rated health over time. The first four models (Models 1–4) only include baseline controls (i.e., age, region, urbanicity). The last four (Models 5–8), include all socio-demographic factors. Across models, year is coded in decades, with the initial decade (1970s) representing the referent. Survey year variables (i.e., 1980s, 1990s, 2000s, 2010s) represent the magnitude of “relative” change or change in odds (for a given race-gender group in a particular decade) in self-rated health compared to the initial decade or 1970s (the referent). If above “1,” it suggests that on average self-rated health improved relative to the 1970s for a particular group (e.g., for Black Women). If below “1” it suggests a relative decline (compared to the 1970s). Table 2 demonstrates that while White men have experienced little to no change in their self-rated health status across the first four decades of the survey (1970s–2000s), as a group, they experienced a discernible pattern of decline in their health status in recent years (2010s) Model 1 : [$\beta_{2010s} = 0.724; p = 0.001$]). White women on the other hand, made significant gains in their health status between the 1970s and 1990s, with some leveling off between the 1990s and 2000s (Model 2 : [$\beta_{1990s} = 1.296; p = 0.001; \beta_{2000s} = 1.226; p = 0.001$]). Like White men, however, by 2010, White women experienced a parallel, but perhaps less pronounced, pattern of self-rated health decline: (Model 2 : [$\beta_{2010s} = 1.048; p = ns$]).

In the case of White males, their health ratings today are significantly worse than those observed four decades ago (1970s); among White women, their health status (in the 2010s) represents a complete reversal of gains made in previous decades. In contrast, both Black women and Black men report feeling healthier today than they were in the 1970s, notwithstanding some interdecadal fluctuations in health status. In the case of Black women, there has been some leveling off since the 1990s. In the case of Black men, health ratings have followed a cyclical pattern; falling rapidly during the period coinciding with the Great Recession (2000s [or 2000–2008]—Model 3 : $\beta_{years} = 1.074; p = ns$) and again improving

⁴ Average marginal effects (AMEs) differ from marginal effects where other IVs are set at means (MEMs). MEMs represent the “average case” in one’s data. There is strong support in the methodological literature that AMEs are superior to MEMs because AMEs utilize the entire data set (Hanmer and Kalkan 2013; Williams 2012), rather than the estimated “means” of one’s data set—a hypothetical ideal type (e.g., average education, averaged income, average race, average marital status) that does not exist in the real world.

during the economic recovery (2010s-Model 4 : $\beta_{years} = 1.345; p = 0.05$). In the full models (Models 5–8), adjusting for social change in the domains of the family, work and SES, the observed pattern of decline in health status among White men and women appears to intensify, while gains in self-rated health made by Black men and women since the 2000s are suppressed.

Among controls, age shapes health status in the expected direction, with younger persons (age 18–34) reporting better health than their older (65 and above) or middle-aged (35–64) adult peers (the referent: middle-aged). Net of other factors, socioeconomic attainment (e.g., having high income or education) is associated with more positive health ratings. But the benefit of high income and a college degree appears to be more protective of the health status of White women and men compared to their Black peers (see Models 5–8).⁵ Work and occupations (e.g., high occupational prestige and being employed vs. unemployed) was also associated with more favorable self-rated health. Again, the association between employment (and high occupational prestige) and self-rated health appeared to differ by race; with employment being more protective of the health status of Whites and occupational prestige having a greater impact on the health status of Black women and men (see Models 5–8).⁶ Finally, being married (compared to unmarried), did not appear to consistently improve (or protect) health ratings in our sample.

Have racial and gender disparities in self-rated health increased, decreased, or remained unchanged? While in the first stage of analysis we estimated race/gender group specific trends in self-rated health, in the second stage, we estimate the degree to which the racial/gender gap in self-rated health has decreased, increased, or remained the same over the last forty years (Table 3). Like Table 2, the racial referent in Table 3 is White men (compared to White women, Black men, and Black women), the referent decade is the 1970s, and base race/gender \times year referent category is White men \times 1970s.

Assessing the main effects of gender/race in Model 1, Black women compared to any other racial/gender group in the 1970s, were least likely to report excellent or good health (Model 1 : $\beta_{Blackwomen} = 0.534; p = 0.001$). Since the 1970s, Black women (relative to White men) have experienced significant relative gains in self-rated health (Model 2 : $[\beta_{BlackWomenx2010s} = 2.037; p = 0.001]$). This suggests that Black women's well-being not only improved since the 1970s (Table 2), but their health status progressed *relative* to their White male peers. In addition to Black women, Black men also made relative gains in their self-reported health status (Model 2 : $[\beta_{BlackMenx2010s} = 1.805; p = 0.001]$). Although White women experienced a

⁵ Supplementary analysis of the full sample where a multiplicative race \times gender \times SES (i.e., income, education) indicated that increases in income and educational attainment had a more protective effect on the health status of White men and White women compared to Black men and Black women.

⁶ Supplementary analysis of the full sample where a multiplicative race \times gender \times work/occupation (i.e., work status, occupational prestige) indicated that while being employed had a greater impact on the health status of White men and women, Black men and women experienced greater health returns as occupational prestige increased. In other words, while simply getting a job (or being employed) may have a relatively weak association on the health of Black men and women (net of other factors), securing a "good" job (e.g., high occupational prestige) on the other hand, has much greater (and independent) impact on self-rated health of Black men and women. These findings are intriguing, but however, beyond the scope of this study. Future research should investigate the potential role that differential returns in education, income, employment and/or occupational prestige play in persistence and change in self-rated health inequalities at the intersection of gender and race.

Table 2 Ordered logistic regression of self-rated health by gender and race: General Social Survey, 1972–2018

Variables	Full models							
	Base models				Full models			
	White men Model 1	White women Model 2	Black men Model 3	Black women Model 4	White men Model 5	White women Model 6	Black men Model 7	Black women Model 8
1980s	1.022 (0.050)	1.158*** (0.051)	1.229 (0.158)	1.356** (0.156)	0.994 (0.050)	1.041 (0.048)	1.099 (0.144)	1.317* (0.157)
1990s	0.992 (0.048)	1.296*** (0.056)	1.411** (0.185)	1.650*** (0.179)	0.903* (0.046)	1.042 (0.048)	1.222 (0.172)	1.388** (0.162)
2000s	1.017 (0.050)	1.226*** (0.055)	1.074 (0.134)	1.495*** (0.167)	0.905 (0.046)	0.923 (0.045)	0.881 (0.119)	1.175 (0.143)
2010s	0.724*** (0.041)	1.048 (0.054)	1.345* (0.190)	1.496*** (0.172)	0.630*** (0.038)	0.753*** (0.042)	1.073 (0.167)	1.171 (0.151)
Age: 18–34	1.568*** (0.056)	1.525*** (0.050)	2.068*** (0.189)	2.269*** (0.180)	1.770*** (0.072)	1.726*** (0.066)	1.739*** (0.198)	2.041*** (0.187)
Age: 65 +	0.490*** (0.023)	0.445*** (0.017)	0.300*** (0.040)	0.464*** (0.052)	1.105 (0.081)	0.876* (0.047)	0.668* (0.129)	0.871 (0.120)
Less than HS					0.658*** (0.033)	0.540*** (0.024)	0.652*** (0.079)	0.676*** (0.071)
Some College					1.220*** (0.057)	1.161*** (0.047)	1.154 (0.144)	1.159 (0.104)
College					1.714*** (0.085)	1.744*** (0.082)	1.449* (0.233)	1.185 (0.142)
Income (Logged)					1.324*** (0.030)	1.423*** (0.030)	1.126 (0.087)	1.274*** (0.059)
Occ. Prestige					1.006*** (0.002)	1.005** (0.002)	1.004 (0.004)	1.010** (0.003)

Table 2 (continued)

Variables	Base models				Full models			
	White men	White women	Black men	Black women	White men	White women	Black men	Black women
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Widowed					0.924 (0.091)	0.856** (0.048)	0.743 (0.185)	1.009 (0.129)
Divorced					1.073 (0.061)	0.923 (0.048)	0.745 (0.112)	0.812 (0.093)
Separated					0.865 (0.099)	0.850 (0.081)	1.003 (0.182)	0.800 (0.113)
Never married					1.038 (0.053)	0.961 (0.052)	1.138 (0.142)	1.256* (0.127)
Full-Time					1.522*** (0.142)	1.554*** (0.204)	1.272 (0.249)	1.124 (0.182)
Part-Time					1.262* (0.136)	1.523** (0.203)	1.461 (0.348)	1.071 (0.202)
Vacation/Illness					1.093 (0.169)	1.004 (0.160)	0.427* (0.167)	0.778 (0.211)
Retired					0.606*** (0.070)	0.953 (0.144)	0.408*** (0.111)	0.581* (0.132)
In School					1.775*** (0.230)	1.748*** (0.289)	1.036 (0.292)	1.365 (0.316)
Keep house					0.721 (0.133)	1.042 (0.138)	1.252 (0.424)	0.659* (0.117)
Other					0.180***	0.247***	0.190***	0.260***

Table 2 (continued)

Variables	Base models				Full models			
	White men	White women	Black men	Black women	White men	White women	Black men	Black women
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Attendance					(0.032)	(0.048)	(0.055)	(0.073)
North	1.148** (0.051)	1.293*** (0.058)	1.103 (0.137)	1.140 (0.110)	1.065*** (0.007)	1.051*** (0.006)	1.027 (0.020)	1.040* (0.017)
Midwest	1.068 (0.043)	1.186*** (0.046)	1.011 (0.111)	0.989 (0.098)	1.112* (0.051)	1.245*** (0.060)	1.118 (0.146)	1.071 (0.108)
West	1.200*** (0.055)	1.226*** (0.053)	0.994 (0.148)	0.993 (0.139)	1.071 (0.044)	1.152*** (0.045)	1.020 (0.116)	0.962 (0.100)
Urban	1.280*** (0.052)	1.257*** (0.045)	1.229 (0.152)	1.321** (0.128)	1.212*** (0.058)	1.180*** (0.054)	0.929 (0.144)	0.952 (0.143)
Suburb	1.278*** (0.053)	1.322*** (0.051)	1.137 (0.167)	1.672*** (0.199)	1.076 (0.045)	1.064 (0.039)	1.140 (0.145)	1.127 (0.116)
Constant 1	0.057*** (0.004)	0.081*** (0.005)	0.097*** (0.015)	0.165*** (0.020)	0.990 (0.042)	4.533*** (1.185)	0.269 (0.219)	1.906 (1.013)
Constant 2	0.338*** (0.018)	0.444*** (0.022)	0.653** (0.089)	1.104 (0.123)	13.695*** (3.569)	28.795*** (7.523)	2.205 (1.795)	14.980*** (8.042)
Constant 3	2.742*** (0.143)	3.589*** (0.179)	4.931*** (0.698)	9.377*** (1.123)	136.667*** (35.865)	288.111*** (76.321)	19.270*** (15.645)	149.618*** (81.570)
Pseudo R ²	0.02	0.02	0.04	0.04	0.08	0.08	0.09	0.08
N	17,383	21,230	2,731	4,402	17,383	21,230	2,731	4,402

Models 1–4 only include baseline controls for age, region, and urbanicity. Models 5–8 include all socio-demographic controls

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ (two-tailed test; robust standard errors in parentheses)

pattern of *absolute* decline between the 2000s and 2010s after making significant gains in prior decades (based on the findings from Table 2: Model 2), Table 3 demonstrates that the reversal in health status experienced by White women in the post-recession era was less pronounced than the decline experienced by their White male counterparts in the 2010s (Model 2 : [$\beta_{WhiteWomenx2010s} = 1.432; p = 0.001; \beta_{2010s} = 0.732; p = 0.001$]). Like the models that adjust for social change in Table 2, the observed pattern of decline in health status among White men and women appears to intensify in Table 3 (Model 3), while gains in self-rated health made by Black men and women (but especially Black women) since the 1970s are in part suppressed.

To supplement patterns in Table 3 (Model 3), we provide a graphic depiction of persistence and change in self-rated health patterns (i.e., predicted probability of: excellent, good, fair, and poor health) at the intersection of gender and race, 1972–2018 (see Figs. 1, 2, 3, 4). These figures slightly differ from Table 3 in that year is coded in four to five-year intervals (as opposed to decades) to provide greater nuance in self-rated health trajectories over time. The final three time periods reflect the pre-recession (2002, 2004, 2006); recession/immediate aftermath (2008, 2010, 2012); and the post-recession/recovery era (2014, 2016, 2018).

Figures 1, 2, 3, 4 demonstrate a pattern of virtual convergence between the early 1970s to late-2010s across nearly every level of self-rated health, with only one exception: historically there has been little to no difference in the likelihood of reporting “good health,” with parallel trajectories across each gender-racial group. In many ways the “good health” category represents the most common response category with between 45% to 46% of respondents (regardless of race or gender) reporting that their health was better than average (“good”) across the span of the survey. Overall, however, White men and White women have experienced significant declines at the upper bound of self-rated health (i.e., excellent health) beginning in the early 2000s, while Black men and women have experienced a general pattern of improvement. Overall, for example, the likelihood of “excellent” self-rated health (from 1972–1976 to 2014–2018) decreased by about 30% (0.33–0.23) among White men and 16% for White women (0.32–0.27), while moderately increasing by about 4% for Black men (0.27–0.28), and 14% among Black women (0.21–0.24). Consistent with the regression models, self-rated health declines for both White men and White women were most pronounced during periods that coincided with the Great Recession (2008–2012) and economic recovery/post-recession (i.e., 2014–2018).

5 Discussion

In this paper we examined self-rated health patterns in the general population at the intersection of gender and race from 1972 to 2018. We find that like previous work (Cummings & Jackson, 2008; Schnittker, 2007), self-rated health differentials have followed a pattern of convergence across the first four decades of the survey (1970s–2000s), with White women and Black women experiencing gains, and Black men and White men experiencing little to no change overall. Distinct from previous work, however (2010–2018), African Americans made significant gains in their health status post-recession, with a more pronounced pattern of improvement among Black women; while the U.S. White population (but especially White men), experienced an unprecedented pattern of health decline. The pattern of declining health status experienced by White men, led to a complete erosion of their perceptions of their health compared to in previous decades. These patterns although

Table 3 Ordered logistic regression of self-rated health for full sample: General Social Survey, 1972–2018

Variables	Model 1	Model 2	Model 3
White women	0.943** (0.020)	0.792*** (0.038)	0.969 (0.050)
Black men	0.657*** (0.031)	0.525*** (0.050)	0.747** (0.075)
Black women	0.534*** (0.020)	0.363*** (0.032)	0.533*** (0.050)
1980s	1.114*** (0.034)	1.023 (0.050)	0.986 (0.050)
1990s	1.188*** (0.036)	0.993 (0.048)	0.895* (0.045)
2000s	1.145*** (0.035)	1.024 (0.049)	0.893* (0.045)
2010s	0.952 (0.033)	0.732*** (0.041)	0.619*** (0.035)
White women × 1980s		1.130 (0.074)	1.054 (0.071)
White women × 1990s		1.307*** (0.084)	1.182* (0.079)
White women × 2000s		1.200** (0.079)	1.062 (0.072)
White women × 2010s		1.432*** (0.109)	1.263** (0.099)
Black men × 1980s		1.210 (0.168)	1.160 (0.166)
Black men × 1990s		1.433* (0.202)	1.384* (0.208)
Black men × 2000s		1.049 (0.140)	0.999 (0.137)
Black men × 2010s		1.805*** (0.273)	1.777*** (0.282)
Black women × 1980s		1.354* (0.167)	1.378* (0.176)
Black women × 1990s		1.670*** (0.191)	1.571*** (0.190)
Black women × 2000s		1.475*** (0.174)	1.395** (0.170)
Black women × 2010s		2.037*** (0.252)	1.948*** (0.254)
Constant 1	0.067*** (0.003)	0.060*** (0.003)	2.093*** (0.355)
Constant 2	0.391*** (0.014)	0.348*** (0.015)	14.253*** (2.432)
Constant 3	3.148*** (0.111)	2.808*** (0.118)	139.722*** (23.986)
Pseudo R ²	0.03	0.03	0.08
N	45,746	45,746	45,746

All models include baseline controls for age, region, and urbanicity. Model 1 and 2 includes baseline controls only. Model 3 includes all controls and socio-demographic factors (controls not shown due to space)

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ (two-tailed test; robust standard errors in parentheses)

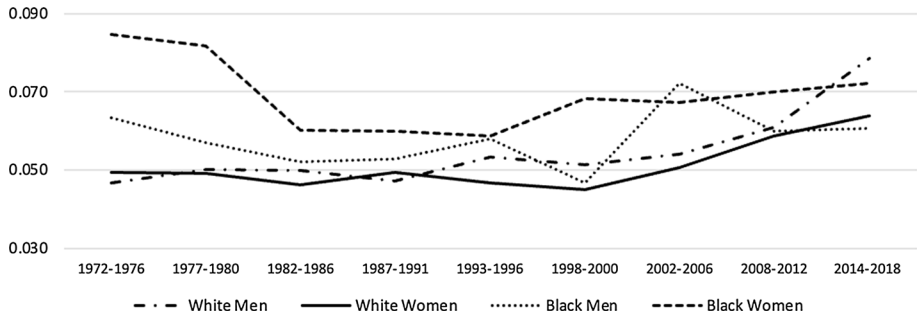


Fig. 1 Predicted probability of poor health by gender and race: General Social Survey, 1972–2018

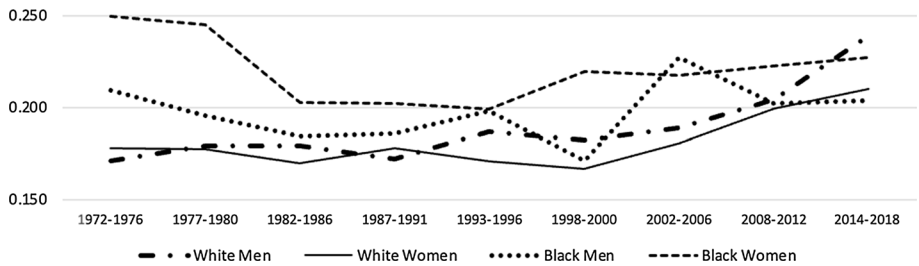


Fig. 2 Predicted probability of fair health by gender and race: General Social Survey, 1972–2018

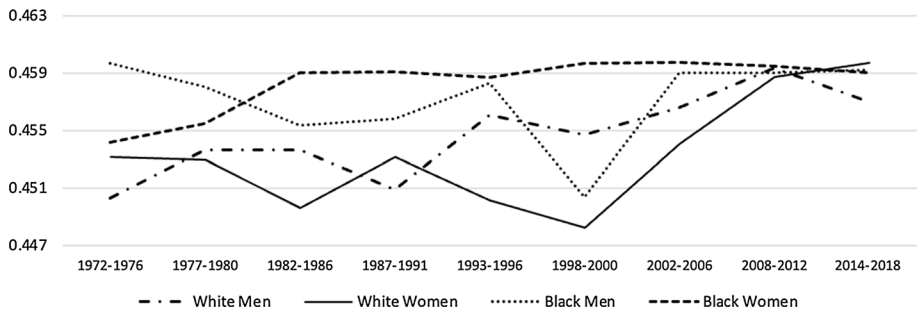


Fig. 3 Predicted probability of good health by gender and race: General Social Survey, 1972–2018

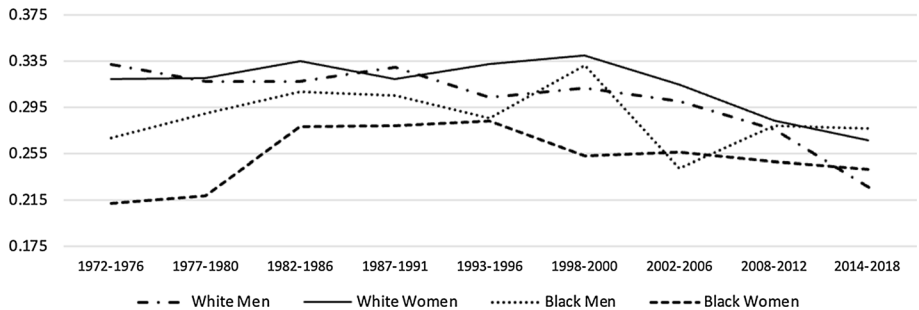


Fig. 4 Predicted probability of excellent health by gender and race: General Social Survey, 1972–2018

striking, further clarifies work indicating recent self-rated health declines in the general population post-recession (Beck et al., 2014; Case & Deaton, 2015). Building on previous work, we find that these patterns do indeed vary at the intersection of gender and race, in fact, while Black women and men report feeling healthier today than they were in the 1970s and White women report being about as healthy as they were four decades ago, White men as a group report feeling comparatively worse today than they did more than forty years ago.

The findings of this paper also coincide with burgeoning interdisciplinary research demonstrating that White Americans (compared to their African-American peers) have experienced greater health decline since the recession; a finding that appears to exist across objective indicators of well-being like mortality and life expectancy (Case & Deaton, 2015; Ho & Hendi, 2018; Malat et al., 2018; Woolf et al., 2018) as well as subjective appraisals of well-being like happiness (Cummings 2020). In concert, these findings provide strong support for the utility of examining health/well-being across multiple domains; assessing both the length of life and the quality of people's lives while they live. A surprising finding, this unparalleled decline in self-rated health experienced by White men occurred *after* the recession (continuing through recovery). This suggests that the health status of White men was not simply shaped by the macroeconomic forces brought on by the recession, but possibly by social-political forces most likely preceding the 2016 U.S. presidential election (i.e., the election of the first Black U.S. President). This explanation aligns with Malat, Timberlake, and Williams's (2011) work, demonstrating immediate improvement in self-rated health among Blacks preceding the election of President Obama, but no such change in the health status of Whites. This work also complements recent work (Cummings 2020) demonstrating that although White Americans in general and White men did not suffer greater financial or job loss during the Great Recession (the opposite is the case), Whites (but especially White men) may "perceive" that they experienced greater financial loss and perhaps are primary victims of the economic downturn, in part leading to rapid declines in their well-being since the 2010s.

As a study limitation, the study population only includes non-institutionalized individuals. Given the growth of mass incarceration (e.g., incarceration of Black men) over the last three decades, it is possible that social selection (e.g., less healthy men being removed from the general population vis-à-vis incarceration) may have artificially exaggerated the narrowing Black male-White male health patterns post-recession. If selection effects are at play, however, it would have the largest impact on temporal trends in self-rated health among segments of the Black male population most vulnerable to being incarcerated (young, less than HS diploma); suggesting we should interpret findings for the most at-risk Black male population with caution. Among non-elderly Black men who have completed a high school diploma or college degree, incarceration rates since the 1980s have only increased marginally (Western & Pettit, 2010). Supplementary analysis demonstrates that the findings presented here (self-rated health patterns) appear to follow the same shape (but greater magnitude) as education increases; providing compelling evidence that self-rated health gains occurred for Black male populations with minimal exposure to mass incarceration as well (e.g., Black men with a high school diploma and college degree).

Finally, previous work has indicated that self-rated health may not have the same meaning across gender (Assari, 2016) or race (Assari et al., 2016; Erving & Zajdel, 2022); having a stronger association with mortality later in life for men (compared to women) and Whites (compared to Blacks). Given this work, we should interpret self-rated health patterns across race/gender with caution (Erving & Zajdel, 2022). Nonetheless, our analysis here goes beyond trends and differentials in self-rated health across race/gender. We also

assess these patterns within race/gender. Within gender and race, the self-rated health status of both White men and White women have followed a pattern of decline between 2010 and 2018, with a more pronounced pattern of decline occurring among White men. This pattern is not explained by changes in SES (e.g., education, income, occupational prestige), marriage (e.g., divorce, separation) or labor force status. In fact, controlling for these social factors only further intensifies the declining trend in self-rated health observed among White men and women between 2010–2018. This finding perhaps suggest that while changes across various domains of social life central to health (e.g., gains in education, occupational prestige) may help explain health improvement among Black women and men over time, some other social process, mechanism or social force appears to undergird self-rated health declines among White men and women (especially during the post-recession years).

Future work should further explore the degree which the recent decline in self-rated health (and mortality) during the post-recession/Obama years is indicative of a larger decline in well-being that co-occurs across multiple domains of health/well-being in the White (male) population. Furthermore, scholars should also seek to understand whether specific segments of the White population or other populations are vulnerable to health declines and the extent to which despair or financial precarity (given differential health returns to increases in SES by race/gender) may function as a primary psychosocial mechanism or driver that undergirds the more recent downward trend in well-being in the United States.

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Declarations

Conflict of interest The author does not have any conflict of interest.

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