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Racial, Ethnic, and Socioeconomic Disparities in Self-reported Health Among U.S. Adults, 2023–2024

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Abstract

Introduction Previous research has shown narrowing racial disparities in self-reported health. However, these disparities may have worsened in recent years, particularly during and after the COVID-19 pandemic. Less is known regarding the current state of disparities in self-reported health.

Methods Participants are from the 2023 and 2024 U.S. National Health Interview Survey. Using survey-weighted, age- and sex-adjusted modified Poisson regression models, we examined associations of race, ethnicity, and socioeconomic status with fair or poor self-reported health, both overall and stratified by levels of education, income, and health insurance status.

Results Among 251,930,438 adults aged≥18 years (unweighted N=60,449), 14.9% (95% CI: 14.5, 15.3) reported fair or poor health. Compared to those with a bachelor's degree or higher, those who had not completed high school had a higher prevalence of fair or poor health (prevalence ratio [PR]=3.79, 95% CI: 3.52, 4.08). Additionally, compared to people with household income≥4 times the federal poverty line, those with household incomes below the federal poverty line had a higher prevalence of fair or poor health (PR=3.94, 95% CI: 3.70, 4.19). Non-Hispanic Black (PR=1.56, 95% CI: 1.46, 1.67) and Hispanic (PR=1.49, 95% CI: 1.39, 1.59) adults were more likely than non-Hispanic White adults to report fair or poor health.

Conclusion In this U.S. nationally representative study, fair or poor self-reported health was more prevalent among adults with lower socioeconomic status and among non-Hispanic Black and Hispanic adults. These findings underscore the need for policy interventions that simultaneously address socioeconomic inequality and structural racism to improve population health outcomes.

Highlights

- Fair or poor self-reported health was more prevalent among adults with lower socioeconomic status.
- Fair or poor self-reported health was more prevalent among non-Hispanic Black and Hispanic adults.
- Racial and ethnic disparities persisted even among adults with higher socioeconomic status.

Keywords Health disparities · Self-reported health · Race and ethnicity · Socioeconomic status · National Health Interview Survey

Introduction

Historically, non-White Americans and individuals with lower socioeconomic status have experienced significant health disparities [1], driven by factors including lower access to healthcare, lower health literacy, discrimination, segregation, and chronic stress. [2] Despite these structural barriers, disparities in all-cause mortality between Black and White adults narrowed from 1999 to 2015. [3] Consistent with this trend, data from the U.S. National Health Interview Survey (NHIS) showed that disparities in self-reported

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health between low-income Black and White individuals were reduced by nearly 7% from 1999 to 2018. [4]

The COVID-19 pandemic may have reversed many of these gains and exacerbated racial and socioeconomic disparities in health. During the pandemic, mortality rates were more than twice as high among Black and Hispanic Americans as among White Americans. [5] Additionally, Americans who never attended college had COVID-19 mortality rates more than twice as high as Americans with a bachelor's degree. [6] Furthermore, less than 50% of the racial disparities in COVID-19 incidence and mortality were accounted for by disparities in socioeconomic status. [6–8] Given these worsening health disparities and their intersectional patterning by race and socioeconomic status, an updated analysis is needed to characterize the current state of population health across these dimensions.

Self-reported health is a valuable population health metric. It is valid and reliable across populations and over time [9], is easy to ascertain via questionnaire [10], and serves as a reliable indicator of population health. [11] Numerous studies have shown that poorer self-reported health is prospectively associated with adverse outcomes, including increased risk of cardiovascular events [12], increased risk of hospitalizations, and higher all-cause mortality. [13, 14] Self-reported health is also intrinsically valuable as it captures health status in a patient-centered way, a core domain of high-quality healthcare. [15]

In this study, we used data from the 2023 and 2024 NHIS cycles to examine self-reported health among Americans. We examined self-reported health for the overall population, as well as stratified by race, ethnicity, and measures of socioeconomic status. We hypothesized that people with lower income and lower educational attainment would have poorer self-reported health, and that disparities between Black and White Americans would persist even among those with lower socioeconomic status. We also examined how racial disparities in self-reported health changed before, during, and after the COVID-19 pandemic.

Methods

Study Population

Participants are from the 2023 and 2024 NHIS. [16] NHIS is an annual survey of the civilian, non-institutionalized, United States population, conducted by the National Center for Health Statistics. The 2023 and 2024 Sample Adult files included 29,522 and 32,629 participants, respectively. NHIS data were collected through confidential household interviews, including interviews completed at least partially by telephone. NHIS field staff collect self-reported information on participants' socioeconomic status, healthcare access, and health status.

Study Sample

In the primary analysis, from an initial sample of 62,151, we excluded 11 participants (0.02%) who responded "refused" or "don't know" to sex, and 36 participants (0.06%) who responded "refused" or "don't know" to self-reported health. We also excluded 1,655 participants who were not categorized as non-Hispanic White, non-Hispanic Black, non-Hispanic Asian or Hispanic, as racial and ethnic disparities were a primary focus of this analysis. This led to a final unweighted study sample of 60,449 for the primary analyses.

Survey Weighting

We created survey weights in accordance with the recommended procedures from NHIS. For each year, we used the recommended survey weight divided by the number of years included (two in this study for the primary analyses). Per NHIS recommendation, we used standard variance estimation variables provided by NHIS. [17]

Measures of Socioeconomic Status

Measures of socioeconomic status we examined include educational attainment, income, and insurance status. Educational attainment was determined via the question "*What is the highest level of school you have completed or the highest degree you have received?*" We categorized this variable into less than high school, high school diploma/General Educational Development (GED), some college, and bachelor's degree or higher, based on thresholds used in prior literature. [4] Income was determined based on the income to poverty ratio (PIR), based on participants' self-reported household income as a multiple of the federal poverty line. We categorized income in three categories of PIR <1, 1 to <4, and ≥ 4, based on previously used thresholds. [18] We also categorized participants based on whether or not they had health insurance, based on the question "*Are you covered by any kind of health insurance or some other kind of health care plan?*"

Race and Ethnicity

Race was determined based on the question "*What race do you consider yourself to be?*" Ethnicity was ascertained based on the question "*Do you consider yourself to be Hispanic or Latino?*" These answers were then combined to create a new variable with categories "Hispanic," "non-Hispanic White only," "non-Hispanic Black/African American only," "non-Hispanic Asian only," "non-Hispanic American Indian or Alaska Native only," "non-Hispanic

American Indian or Alaska Native and other group," and "other single or multiple races." Due to limited sample sizes for American Indian and Alaska Native and people of other races, we limited the current study to those with Hispanic, non-Hispanic White, non-Hispanic Black, or non-Hispanic Asian race or ethnicity (subsequently described as Hispanic, White, Black, or Asian). [19]

Self-reported Health

During the adult NHIS visit, participants aged ≥ 18 years were asked "*Would you say your health in general is excellent*, *very good*, *good*, *fair*, *or poor?*" We categorized this response into a dichotomous variable comprised of those with "fair or poor" health compared to those with "excellent, very good, or good health" in alignment with the approach taken in prior studies. [4, 20]

Statistical Analysis

Prevalence estimates were presented using survey-weighted proportions. Using survey-weighted modified Poisson regression with robust variance, adjusted for age and sex, we examined the association between measures of socioeconomic status and self-reported health for the overall sample and within each racial and ethnic group. We also examined the associations of race and ethnicity with self-reported health, overall and stratified by levels of education, income, and health insurance status.

We performed two additional analyses. To assess whether associations of race and ethnicity and socioeconomic status with fair or poor self-reported health persisted after mutual adjustment, we fitted a multivariable-adjusted model that included race and ethnicity and all socioeconomic status measures simultaneously. In addition, to evaluate temporal changes in self-reported health relative to the pre-COVID-19 period, we examined trends in fair or poor health from 2019 to 2024 in the overall sample and stratified by race and ethnicity. We estimated *p*-values for trend using unadjusted logistic regression models with calendar year modeled as a continuous predictor.

All analyses were performed using Stata version 19.5 (College Station, TX). [21] Figures were designed using R Version 4.5.2 (Vienna, Austria) [22] with the "ggplot2" package for line graphs. [23]

Results

The survey-weighted population consisted of 251,930,438 adults aged≥18 years (Table 1), with 14.9% (95% CI: 14.5, 15.3) self-reporting fair or poor health. The population was 63.2% White, 12.1% Black, 6.5% Asian, 18.2% Hispanic, and 51.1% female. The mean age was 48.5 (95% CI: 48.2, 48.7) years; 10.4% (95% CI: 9.9, 11.0) had less than a high school education, 9.9% (95% CI: 9.5, 10.4) had an income below the federal poverty line, and 7.7% (95% CI: 7.3, 8.1) had no health insurance. Compared to White adults (13.9%, 95% CI: 13.5, 14.4), the proportion of those with self-reported fair or poor health was higher among Hispanic (16.7%, 95% CI: 15.7, 17.7) and Black (19.4%, 95% CI: 18.2, 20.7) adults, but lower among Asian (10.9%, 95% CI: 9.8, 12.1) adults.

When stratified by socioeconomic status, the prevalence of fair or poor health was highest among people with less than a high school education (29.4%, 95% CI: 27.8, 31.1), and lowest among those with a bachelor's degree or higher (7.2%, 95% CI: 6.8, 7.6) (Table 2). The prevalence was also higher among those with income below the federal poverty line (29.1%, 95% CI: 27.7, 30.5) than among those with income 1 to <4 times the federal poverty line (18.2%, 95% CI: 17.6, 18.8) or ≥4 times the federal poverty line (7.9%, 95% CI: 7.5, 8.3). Prevalence was similar among those with insurance (15.0%, 95% CI: 14.6, 15.5) and those without insurance (13.2%, 95% CI: 12.0, 14.5). These patterns persisted across race and ethnicity.

When we examined associations of socioeconomic status with fair or poor health, people with lower educational attainment were more likely to self-report being in fair or poor health, with the highest prevalence ratio for those with less than a high school education (Table 3). Similarly, people with lower income were more likely to report being in fair or poor health, with the highest prevalence ratio for those with incomes below the poverty line. Associations between insurance status and fair or poor health were inconsistent across racial and ethnic groups.

When we examined associations of race and ethnicity with fair or poor health, compared to White adults, Black (prevalence ratio [PR] = 1.56, 95% CI: 1.46, 1.67), and Hispanic (PR = 1.49, 95% CI: 1.39, 1.59) adults were more likely to report fair or poor health, while Asian adults were less likely to report fair or poor health (PR = 0.88, 95% CI: 0.78, 0.98) (Table 2).

When examining racial and ethnic disparities within groups of socioeconomic status, Black and Hispanic adults were generally more likely than White adults to report fair or poor health, particularly among those with higher socioeconomic status (Table 2). For example, among adults with a bachelor's degree or higher, Black (PR = 1.69, 95% CI: 1.42, 2.00) and Hispanic (PR = 1.56, 95% CI: 1.32, 1.84) adults were more likely to report fair or poor health. Similar patterns were observed among those with household income≥4 times the federal poverty line. Asian adults generally had a similar or lower prevalence of fair or poor

Table 1 Characteristics of participants in the National Health Interview Survey, 2023–2024

Characteristics (% or survey means, 95% CI)	Overall[1]	Non-Hispanic White	Non-Hispanic Black	Non-Hispanic Asian	Hispanic
Weighted *N*	251,930,438	159,167,818	30,579,666	16,276,531	45,906,422
Age (years)	48.5 (48.2, 48.7)	50.7 (50.4, 51.0)	46.4 (45.8, 47.0)	46.7 (45.9, 47.5)	42.8 (42.3, 43.3)
% female	51.1 (50.6, 51.6)	50.3 (49.7, 50.9)	53.7 (52.2, 55.2)	52.4 (50.4, 54.4)	51.8 (50.6, 53.0)
Education[2]					
Less than high school	10.4 (9.9, 11.0)	6.2 (5.8, 6.6)	11.0 (9.8, 12.2)	7.1 (5.9, 8.5)	26.0 (24.5, 27.6)
High school diploma/ GED	27.2 (26.6, 27.7)	26.2 (25.5, 26.9)	32.1 (30.4, 33.8)	15.6 (13.9, 17.5)	31.2 (30.0, 32.4)
Some college	28.8 (28.3, 29.3)	30.2 (29.5, 30.8)	33.6 (32.2, 35.1)	17.6 (16.1, 19.3)	24.8 (23.7, 25.9)
Bachelor's degree or higher	33.6 (32.8, 34.4)	37.4 (36.4, 38.3)	23.3 (21.9, 24.8)	59.7 (57.0, 62.3)	18.0 (16.9, 19.2)
Income to poverty ratio					
<1	9.9 (9.5, 10.4)	7.0 (6.6, 7.5)	15.7 (14.4, 17.0)	7.8 (6.6, 9.1)	17.0 (15.6, 18.5)
1 to <4	47.6 (46.9, 48.3)	43.5 (42.7, 44.3)	55.8 (54.2, 57.4)	39.4 (37.2, 41.7)	59.2 (57.9, 60.5)
≥4	42.5 (41.5, 43.4)	49.5 (48.5, 50.5)	28.6 (26.7, 30.5)	52.8 (50.0, 55.5)	23.8 (22.5, 25.2)
% No health insurance[3]	7.7 (7.3, 8.1)	4.7 (4.4, 5.0)	7.9 (7.0, 8.8)	3.6 (2.8, 4.4)	19.7 (18.3, 21.2)
% Fair or poor health	14.9 (14.5, 15.3)	13.9 (13.5, 14.4)	19.4 (18.2, 20.7)	10.9 (9.8, 12.1)	16.7 (15.7, 17.7)

Abbreviations: *CI* confidence interval, *GED* General Educational Development

1. The overall unweighted sample consisted of 60,449 adults

2. Unweighted N for education = 60,163

3. Unweighted N for health insurance = 60,379

health than White adults, except for a higher prevalence among those with a bachelor's degree or higher (PR = 1.28, 95% CI: 1.06, 1.55). When we included all covariates in a single multivariable-adjusted model, adults with lower education and lower income were more likely to report fair or poor health (Table 4). Additionally, compared to White adults, Black adults were more likely to self-report fair or poor health (PR = 1.22, 95% CI: 1.14, 1.30). By contrast, adults without insurance were less likely to self-report fair or poor health (PR = 0.82, 95% CI: 0.74, 0.91).

When we examined trends in fair or poor health over time, there were no significant changes in the prevalence of fair or poor health from 2019 to 2024 for the overall sample (Fig. 1). Fair or poor health remained stable among most racial and ethnic groups, although the prevalence of fair or poor health increased slightly among Asian adults (p-trend = 0.03).

Discussion

In this nationally representative analysis of United States adults from 2023 to 2024, lower socioeconomic status was associated with poorer self-reported health across all racial and ethnic groups. Individuals with less than a high school education and those living below the federal poverty line were nearly four times as likely to report fair or poor health as their counterparts with the highest socioeconomic status. These disparities persisted despite adjusting for age and sex. Importantly, racial and ethnic disparities in self-reported health were not eliminated within higher socioeconomic strata, indicating that socioeconomic advantage alone does not fully mitigate the effects of disparities that may arise from structural racism, differential access to health-promoting environments, and psychosocial stressors. In the mutually adjusted model, lower education and lower income remained independently associated with a higher prevalence of fair or poor health, suggesting that they may represent distinct dimensions of socioeconomic disadvantage.

Black and Hispanic adults were significantly more likely to report fair or poor health than White adults, while Asian adults reported the lowest prevalence of fair or poor health. The difference between Black and White adults persisted even after controlling for multiple measures of socioeconomic status. However, even among individuals with a bachelor's degree or higher and among those with higher income, Black and Hispanic adults reported worse self-reported health than White adults. This pattern reflects the concept of diminished returns of socioeconomic status for racial and ethnic minority populations, in which gains in education and income do not translate into equivalent improvements in health outcomes. [24–26]

Among adults with lower socioeconomic status, findings for self-reported health by race and ethnicity were more

Table 2 Survey-weighted prevalence of fair or poor health and adjusted prevalence ratios (95% CIs) by race and ethnicity, overall and stratified by socioeconomic status, National Health Interview Survey, 2023–2024

Socioeconomic status measures	Measure	Overall	Non-Hispanic White	Non-Hispanic Black	Non-Hispanic Asian	Hispanic
Overall	Prevalence, %	14.9 (14.5, 15.3)	13.9 (13.5, 14.4)	19.4 (18.2, 20.7)	10.9 (9.8, 12.1)	16.7 (15.7, 17.7)
	Prevalence ratio[1,2]	-	*Ref*	**1.56 (1.46, 1.67)**	**0.88 (0.78, 0.98)**	**1.49 (1.39, 1.59)**
Education						
Less than high school	Prevalence, %	29.4 (27.8, 31.1)	30.3 (27.9, 32.8)	37.4 (33.0, 42.1)	27.6 (20.4, 36.1)	26.6 (24.3, 29.0)
	Prevalence ratio[1,2]	-	*Ref*	**1.22 (1.06, 1.39)**	0.83 (0.62, 1.10)	0.98 (0.88, 1.10)
High school diploma/GED	Prevalence, %	18.9 (18.1, 19.7)	19.3 (18.3, 20.3)	21.9 (19.7, 24.2)	16.4 (13.1, 20.4)	16.2 (14.6, 17.9)
	Prevalence ratio[1,2]	-	*Ref*	**1.31 (1.17, 1.46)**	0.86 (0.69, 1.08)	1.10 (0.98, 1.24)
Some college	Prevalence, %	14.6 (14.0, 15.3)	14.6 (13.8, 15.3)	17.7 (15.9, 19.7)	11.4 (8.8, 14.6)	13.0 (11.5, 14.6)
	Prevalence ratio[1,2]	-	*Ref*	**1.34 (1.19, 1.50)**	0.88 (0.69, 1.13)	1.11 (0.98, 1.27)
Bachelor's degree or higher	Prevalence, %	7.2 (6.8, 7.6)	6.8 (6.4, 7.3)	9.7 (8.3, 11.4)	7.2 (6.0, 8.6)	8.0 (6.8, 9.4)
	Prevalence ratio[1,2]	-	*Ref*	**1.69 (1.42, 2.00)**	**1.28 (1.06, 1.55)**	**1.56 (1.32, 1.84)**
Income to poverty ratio						
< 1	Prevalence, %	29.1 (27.7, 30.5)	30.5 (28.5, 32.6)	32.2 (29.3, 35.4)	22.9 (17.7, 29.0)	26.1 (23.7, 28.7)
	Prevalence ratio[1,2]	-	*Ref*	1.07 (0.96, 1.19)	**0.73 (0.58, 0.92)**	0.93 (0.84, 1.04)
1 to <4	Prevalence, %	18.2 (17.6, 18.8)	18.5 (17.8, 19.2)	20.9 (19.4, 22.5)	13.7 (11.6, 16.0)	16.7 (15.5, 18.1)
	Prevalence ratio[1,2]	-	*Ref*	**1.31 (1.21, 1.41)**	**0.82 (0.70, 0.96)**	**1.15 (1.06, 1.26)**
≥4	Prevalence, %	7.9 (7.5, 8.3)	7.6 (7.1, 8.0)	9.5 (8.0, 11.2)	7.0 (5.9, 8.4)	9.9 (8.6, 11.3)
	Prevalence ratio[1,2]	-	*Ref*	**1.40 (1.17, 1.68)**	1.08 (0.90, 1.30)	**1.64 (1.40, 1.92)**
Health insurance						
Health insurance	Prevalence, %	15.0 (14.6, 15.5)	14.0 (13.5, 14.5)	19.9 (18.6, 21.3)	10.8 (9.7, 12.1)	17.5 (16.4, 18.7)
	Prevalence ratio[1,2]	-	*Ref*	**1.59 (1.48, 1.71)**	**0.87 (0.78, 0.98)**	**1.53 (1.42, 1.64)**
No health insurance	Prevalence, %	13.2 (12.0, 14.5)	12.9 (11.1, 14.9)	13.6 (10.1, 18.0)	12.6 (6.8, 22.1)	13.4 (11.7, 15.3)
	Prevalence ratio[1,2]	-	*Ref*	1.14 (0.83, 1.56)	1.00 (0.55, 1.81)	1.10 (0.90, 1.34)

Abbreviations: *CI* confidence interval, *GED* general educational development, *Ref* reference

Bolded estimates indicate statistical significance at a two-sided $p < 0.05$

1. Prevalence ratios were estimated using survey-weighted modified Poisson regression with robust variance estimation and adjusted for participant age and sex

2. Prevalence ratios compare each racial or ethnic group with non-Hispanic White adults within the same socioeconomic stratum

nuanced and differed based on measure used. Among adults who had not completed high school, fair or poor health was higher among Black adults than among White adults, a disparity that may partly reflect the lower life expectancy and elevated mortality documented among Black adults with low educational attainment. [27, 28] When stratifying by income, however, rates of fair or poor health were similar between White, Black, and Hispanic adults living below the federal poverty line, a finding consistent with prior NHIS data from 2018 (which used estimates adjusted for age, sex, and region of the United States), which showed no significant differences in fair or poor health between Black and White Americans with incomes below 200% of the federal poverty line. [4] Together, these results suggest that the relationship between race and ethnicity, socioeconomic status, and self-reported health is not uniform and that education and income may capture distinct dimensions of disadvantage.

Finally, we examined whether self-reported health changed across racial and ethnic groups before, during, and after the COVID-19 pandemic. Despite the well-documented disproportionate burden of COVID-19 mortality among Black and Hispanic adults, which further widened racial disparities in life-expectancy [24], we did not find changes in self-reported health among these populations over the study period. This null finding may reflect the acute rather than chronic nature of COVID-19 as a health stressor, such that most survivors returned to their baseline health status following infection.

Table 3 Adjusted prevalence ratios[1] for fair or poor self-reported health by socioeconomic status measures, overall and by race and ethnicity, National Health Interview Survey, 2023–2024

Characteristics	Overall	Non-Hispanic White	Non-Hispanic Black	Non-Hispanic Asian	Hispanic
Education					
Less than high school	**3.79 (3.52, 4.08)**	**4.16 (3.77, 4.60)**	**3.13 (2.57, 3.82)**	**2.54 (1.76, 3.67)**	**2.75 (2.29, 3.29)**
High school diploma/GED	**2.60 (2.44, 2.78)**	**2.73 (2.52, 2.96)**	**2.25 (1.87, 2.71)**	**1.83 (1.35, 2.47)**	**2.15 (1.80, 2.58)**
Some college	**2.04 (1.91, 2.18)**	**2.12 (1.96, 2.29)**	**1.79 (1.49, 2.17)**	**1.55 (1.12, 2.14)**	**1.73 (1.42, 2.11)**
Bachelor's degree or higher	*Ref*	*Ref*	*Ref*	*Ref*	*Ref*
Income to poverty ratio					
<1	**3.94 (3.70, 4.19)**	**4.37 (4.01, 4.75)**	**3.36 (2.79, 4.04)**	**2.80 (2.09, 3.74)**	**2.50 (2.12, 2.94)**
1 to <4	**2.26 (2.14, 2.39)**	**2.33 (2.19, 2.49)**	**2.19 (1.84, 2.62)**	**1.72 (1.35, 2.19)**	**1.67 (1.44, 1.94)**
≥4	*Ref*	*Ref*	*Ref*	*Ref*	*Ref*
Insurance status					
No health insurance	**1.19 (1.08, 1.31)**	**1.24 (1.06, 1.44)**	0.94 (0.70, 1.25)	1.73 (0.96, 3.14)	0.97 (0.84, 1.12)
Health insurance	*Ref*	*Ref*	*Ref*	*Ref*	*Ref*

Abbreviations: *CI* confidence interval, *GED* general educational development, *Ref* reference

Bolded estimates indicate statistical significance at a two-sided $p < 0.05$

1. Prevalence ratios were estimated using survey-weighted modified Poisson regression with robust variance estimation and adjusted for age and sex

Table 4 Associations of sociodemographic factors with self-reported fair or poor health in 2023–2024, model mutually adjusted for all covariates

Sociodemographic Characteristics	Prevalence ratio (95% CI)[1]
Education	
Less than high school	**2.44 (2.23, 2.66)**
High school diploma/GED	**1.95 (1.82, 2.09)**
Some college	**1.65 (1.54, 1.77)**
Bachelor's degree or higher	*Ref*
Income to poverty ratio	
<1	**2.73 (2.54, 2.94)**
1 to <4	**1.79 (1.68, 1.90)**
≥4	*Ref*
Insurance status	
No health insurance	**0.82 (0.74, 0.91)**
Health insurance	*Ref*
Race and ethnicity	
Non-Hispanic White	*Ref*
Non-Hispanic Black	**1.22 (1.14, 1.30)**
Non-Hispanic Asian	0.94 (0.84, 1.05)
Hispanic	1.04 (0.97, 1.12)

Abbreviations: *CI* confidence interval, *GED* general educational development, *Ref* reference

Bolded estimates indicate statistical significance at a two-sided $p < 0.05$

1. Prevalence ratios were estimated using survey-weighted modified Poisson regression with robust variance estimation and adjusted for education, income-to-poverty ratio, health insurance status, and participant race and ethnicity, age, and sex

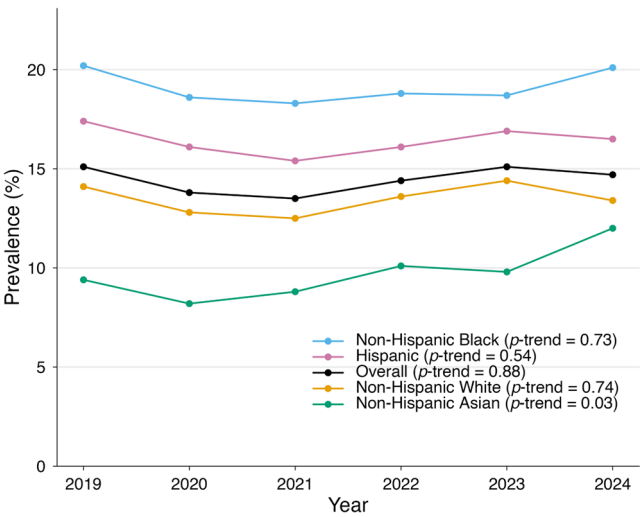


Fig. 1 Trends in the prevalence of fair or poor health in the National Health Interview Survey by year and race or ethnicity from 2019 to 2024. *P*-trends were calculated using unadjusted logistic regression models with year modeled as a continuous predictor and fair or poor health as the outcome

Alternatively, excess mortality among the most vulnerable Black and Hispanic adults during the pandemic may have introduced survivor bias, attenuating observable declines in self-reported health among these groups. In contrast, self-reported health worsened among Asian adults, aligning with recent evidence of increases in disability and years of life lost in this population relative to other racial and ethnic groups. [29, 30] Asian Americans have historically fared well on many aggregate health indicators, making this trend particularly noteworthy and warranting close monitoring as this population continues to grow rapidly.

This study has multiple strengths. NHIS is a large, nationally representative study with validated survey measures. In the current analysis, we examined multiple dimensions of socioeconomic status and incorporated robust statistical methods that accounted for survey weights and complex design. [19] However, this study is limited by the fact that self-reported health is inherently subjective and may be influenced by cultural or linguistic factors, and perceptions of self-reported health vary between sociodemographic subgroups. [31]

Conclusion

In conclusion, socioeconomic, racial, and ethnic disparities in self-reported health remain substantial in the United States, and the prevalence of self-reported fair or poor health has remained largely stable in recent years. Educational attainment and income were strongly associated with self-reported health, yet racial and ethnic disparities persisted even within higher socioeconomic strata, highlighting the pervasive influence of structural inequities. These findings underscore the need for policy interventions that simultaneously address socioeconomic inequality and structural racism to improve population health outcomes. [25, 32–34] Aligning clinical practice with national health equity frameworks, such as Healthy People 2030, and recommendations from the National Academy of Medicine, may provide actionable strategies to monitor, address, and ultimately reduce disparities in self-reported health. [32]

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Declarations

Ethics Approval The Harvard Medical School Institutional Review Board determined that this secondary analysis of publicly available, deidentified data did not constitute human subjects research.

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