Supplemental Methods:

Depression: Each item of the 8-item CES-D (felt depressed, felt that everything was an effort, sleep was restless, could not get going, felt lonely, enjoyed life, felt sad, felt happy) was asked as a yes/no question: "Now think about the past week and the feelings you have experienced. Please tell me if each of the following was true for you much of the time this past week. Much of the time during the past week..." A value of ≥ 3 translates to the traditional 20-item CES-D cutoff of 16, which indicates clinically-significant depression.

Cognition: The TICS-M can be broken down into the following components: Total Cognition, Mental Status, Total Word Recall, Immediate Word Recall, and Delayed Word Recall. The present study used the Total Cognition score. Total Cognition [Range 0-35] (Mental Status + Total Word Recall), Mental Status [Range 0-15] (serial 7's (0-5 points)), backward counting from 20 (0-2 points), object (0-2 points), date (0-4 points), and U.S. President/Vice President naming tasks (0-2 points)), Total Word Recall [Range 0-20] (Immediate + Delayed Word Recall), Immediate Word Recall [Range 0-10] (count of correctly identified words from a 10-word list of nouns), and Delayed Word Recall [Range 0-10] (count of correctly identified words from a 10-word list of nouns after 5 minutes during which the participant answered other survey questions).

Self-Rated Health: This measure was identical to Question 1 in the 36-Item Short Form Survey (SF-36; Ware & Sherbourne, 1992). "In general, would you say your health is: Excellent [1], Very Good [2], Good [3], Fair [4], or Poor [5]?"

Ware Jr JE, Sherbourne CD. The MOS 36-item short-form health survey (SF-36): I. Conceptual framework and item selection. Medical Care. 1992:473-83.

Covariates & Model Specification: Demographic covariates included age (years) and sex (Male/Female). **Physical health covariates** included functional status (activities of daily living (ADL) impairments: Range 0-5; instrumental activities of daily living (IADL) impairments: Range 0-5), multimorbidity (number of chronic conditions from 0-8), body mass index (BMI), and sleep disorder diagnosis. **Mental health and cognition covariates** included TICS-M total cognition score for depression and self-rated health models. A 7-item CES-D score (the 8-item CES-D without the loneliness item) and the single loneliness item from the CES-D were used as covariates for the cognition and self-rated health models. Whether the participant was diagnosed with Alzheimer's disease and related dementias was used as a covariate for each model. Health behaviors included whether the participant ever smoked cigarettes, number of days in any given week that the participant consumed alcoholic beverages, and whether the participant engaged in vigorous, moderate, or light physical activity at least once per week. Healthcare utilization included visiting a physician or nurse practitioner within the past 2 years, and reporting an overnight hospitalization within the past 2 years.

Multimorbidity: Ranging from 0-8, including: high blood pressure or hypertension; diabetes or high blood sugar; cancer or a malignant tumor of any kind except skin cancer; chronic lung disease except asthma such as chronic bronchitis or emphysema; heart attack, coronary heart

disease, angina, congestive heart failure, or other heart problems; stroke or transient ischemic attack (TIA); emotional, nervous, or psychiatric problems; and arthritis or rheumatism),

Income: Household income reflected the total income for the last calendar year and was the sum of the participant and spouse earnings, pensions and annuities, Social Security Income and Social Security Disability, Social Security retirement, unemployment and workers compensation, other government transfers, household capital income, and other income. Reported or imputed household income of $0 was set to missing (n = 176) in order for natural-log transformation to occur.

Methodological References:

Social Determinants of Health: Social determinants of health were selected through a careful review of the literature, with particular focus on systematic reviews, the World Health Organization's bulletins on social determinants of health (https://www.who.int/health-topics/social-determinants-of-health#tab=tab_1), the National Institute on Aging health disparities research framework (https://www.nia.nih.gov/research/osp/framework), and the availability of data in the RAND HRS Longitudinal File.

Reviews & Reports:
Braveman P, Egerter S, Williams DR. The social determinants of health: coming of age. Annual Rev Public Health. 2011;32:381-398.

Braveman P, Gottlieb L. The social determinants of health: it's time to consider the causes of the causes. Public Health Rep. 2014;129:19-31.

Marmot M, Allen JJ. Social determinants of health equity. Amer J Public Health. 2014 Sep;104:517-519.

Marmot M. Social determinants of health inequalities. Lancet. 2005;365:1099-1104.

World Health Organization. A conceptual framework for action on the social determinants of health. 2010. Retrieved from: https://apps.who.int/iris/bitstream/handle/10665/44489/?sequence=1

World Health Organization Commission on Social Determinants of Health. Closing the gap in a generation: health equity through action on the social determinants of health. 2008. Retrieved from: https://apps.who.int/iris/bitstream/handle/10665/43943/97892?sequence=1

Documentatation for the HRS:
Sonnega A, Faul JD, Ofstedal MB, Langa KM, Phillips JW, Weir DR. Cohort profile: the health and retirement study (HRS). Int J Epidemiol. 2014;43:576-585.

CES-D 8 Scale & Cutoff:
Andresen EM, Malmgren JA, Carter WB, Patrick DL. Screening for depression in well older adults: evaluation of a short form of the CES-D (Center for Epidemiologic Studies Depression Scale). Am J Prev Med. 1994;10:77–84.

Blazer D, Burchett B, Service C, George LK. The association of age and depression among the elderly: an epidemiologic exploration. J Gerontol. 1991;46:10–15.

Radloff LS. The CES-D scale: A self-report depression scale for research in the general population. Appl Psychol Meas. 1977;1:385-401.

TICS-M Scale:
Brandt J, Spencer M, Folstein M. The telephone interview for cognitive status. Neuropsychiatry Neuropsychol Behav Neurol. 1988;1:111-117.

Documentation of Cognitive Functioning Measures in the HRS:
Ofstedal MB, Fisher GG, Herzog AR. Documentation of cognitive functioning measures in the Health and Retirement Study. Ann Arbor, MI: University of Michigan. 2005;10. Retrieved from: https://hrs.isr.umich.edu/publications/biblio/5620

Documentation of Imputation of Cognitive Functioning Measures in the HRS (<4% required imputation):
McCammon R, Fisher G, Hassan H, Faul J, Rogers W, Weir D. Health and Retirement Study imputation of cognitive functioning measures: 1992–2016. Survey Research Center, University of Michigan. 2019. Retrieved from: https://hrs.isr.umich.edu/publications/biblio/5760

Phi to Cohen's *d* Transformation:
Lipsey MW, Wilson DB: Practical meta-analysis, SAGE publications, Inc; 2001.

Blinder-Oaxaca Decomposition:
Blinder AS. Wage discrimination: reduced form and structural estimates. J Human Resources. 1973:436-455.

Oaxaca R. Male-female wage differentials in urban labor markets. Int Econ Rev. 1973:693-709.

Jann B. The Blinder–Oaxaca decomposition for linear regression models. The Stata Journal. 2008;8:453-479.

R Packages & Functions Used
Descriptive Statistics Packages: *psych, effectsize, esc*
psych Manual: https://cran.r-project.org/web/packages/psych/psych.pdf
effectsize Manual: https://cran.r-project.org/web/packages/effectsize/effectsize.pdf
esc Manual: https://cran.r-project.org/web/packages/esc/esc.pdf

Functions Used:
psych::describeBy() #Descriptive statistics by group
psych::cohen.d() #Cohen's *d* estimation
psych::phi() #Used to find phi coefficient for two dichotomous variables
effectsize::r_to_d(psych::phi()) #Used to convert phi to Cohen's *d*

Alternatively, the *esc* package can be used to calculate Cohen's *d* from dichotomous variables.

esc::esc_phi(phi, totaln) #Used to convert phi to Cohen's *d*

Blinder-Oaxaca Decomposition Package: *oaxaca*
oaxaca Manual: https://cloud.r-project.org/web/packages/oaxaca/oaxaca.pdf

Functions Used:
set.seed() #Used for reproducibility
oaxaca::oaxaca() #Used to run two-fold and three-fold Blinder-Oaxaca Decomposition

Note that for two-fold decomposition, weight is given to Group A relative to Group B to determine the reference set of coefficients. We extracted characteristics and coefficients effects from "-2", which uses coefficients from a pooled regression (that includes the race/ethnicity group indicator) as reference. See Jann (2008) above for the statistical rationale.

Supplemental Discussion & References:

Race, Ethnicity, Culture, & the DSM-5

Bredström A. Culture and context in mental health diagnosing: Scrutinizing the DSM-5 revision. J Med Humanities. 2019;40:347-63.

La Roche MJ, Fuentes MA, Hinton D. A cultural examination of the DSM-5: Research and clinical implications for cultural minorities. Prof Psychol: Res Pract. 2015;46:183-89.

Masuda A, Qinaʻau J, Juberg M, Martin T. Bias in the diagnostic and statistical manual 5 and psychopathology. In Prejudice, Stigma, Privilege, and Oppression. 2020. (pp. 215-234). Springer, Cham.
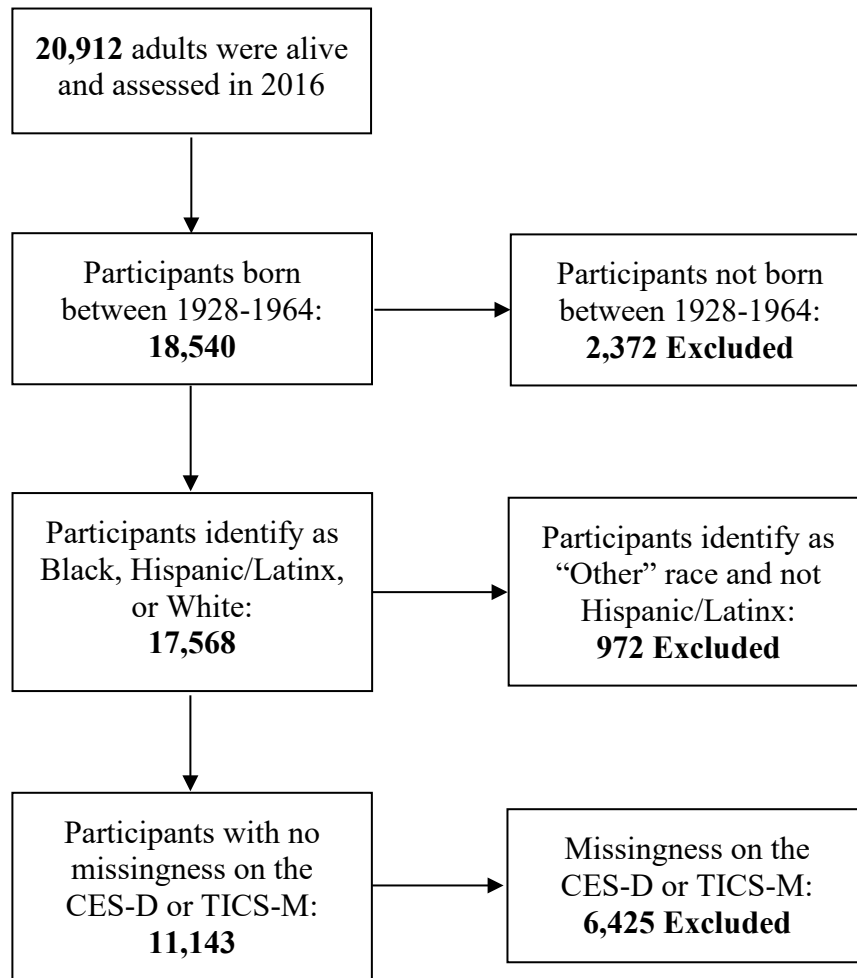
Additional Study Strengths & Limitations

One strength of this study is the inclusion of foreign-born Hispanic/Latinx adults. Studies inconsistently report on the nativity status of their samples or study the impact of nativity status, which is problematic as foreign-born Hispanic/Latinx adults tend to appear healthier than their native-born counterparts(18).

Although depressive symptomatology was generally low in this study, disparities were more prominent by race/ethnicity and birth cohort when using a clinical cutoff (i.e., *older* Hispanic/Latinx and Black adults may be particularly at risk of clinical depression; Supplemental Table 2). The 8-item CES-D is a valid and reliable screening tool that may not distinguish well between depressive symptomatology and demoralization, particularly among those affected by poverty, discrimination, and other social inequities.

This study included a large number of SDoH, though many other SDoH were not included due to data availability and a desire for brevity. Future studies should employ longitudinal modeling to better understand the causal pathway between SDoH and health disparities, including the bidirectional relationships among outcomes (i.e., cognition, depression, self-rated health).

Figure S1. Inclusion criteria for the analytic sample

```
┌──────────────────────┐
│ 20,912 adults were   │
│ alive and assessed   │
│ in 2016              │
└──────────────────────┘
           │
           ▼
┌──────────────────────┐      ┌──────────────────────┐
│ Participants born    │─────▶│ Participants not born│
│ between 1928-1964:   │      │ between 1928-1964:   │
│ 18,540               │      │ 2,372 Excluded       │
└──────────────────────┘      └──────────────────────┘
           │
           ▼
┌──────────────────────┐      ┌──────────────────────┐
│ Participants identify│─────▶│ Participants identify│
│ as Black,            │      │ as "Other" race and  │
│ Hispanic/Latinx,     │      │ not Hispanic/Latinx: │
│ or White:            │      │ 972 Excluded         │
│ 17,568               │      │                      │
└──────────────────────┘      └──────────────────────┘
           │
           ▼
┌──────────────────────┐      ┌──────────────────────┐
│ Participants with no │─────▶│ Missingness on the   │
│ missingness on the   │      │ CES-D or TICS-M:     │
│ CES-D or TICS-M:     │      │ 6,425 Excluded       │
│ 11,143               │      │                      │
└──────────────────────┘      └──────────────────────┘
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Note. In 2016 (Wave 13), 20,912 adults were alive and assessed in the HRS. Inclusion criteria were: 1) Part of the Silent Generation (older-old) or Baby Boomers (younger-old): excluded $n = 2,372$, 2) Identified as Non-Hispanic/Latinx Black, Hispanic/Latinx, or Non-Hispanic/Latinx White adults (excluded $n = 972$). 3) Not have missingness on the 8-item Center for Epidemiological Studies-Depression (CES-D) scale or Modified Telephone Interview for Cognitive Status (TICS-M): excluded $n = 6,425$.

Table S1. Characteristics of the 6,425 adults with missingness on the CES-D or TICS-M

Social Determinants of Health	Excluded Adults N = 6,425
	M (SD) or %
Education (Years)	12.74 (3.25)
Mother's Education (Years)	10.20 (4.17)
Father's Education (Years)	10.12 (4.46)
Number of Years Worked	26.46 (14.26)
Marital Status	
Married or Partnered	66%
Divorced/Separated	17%
Widowed	9%
Never Married	7%
Veteran Status	10%
U.S. Geographic Location	
Northeast	15%
Midwest	19%
South	43%
West	22%
Other	0%
Nativity Status (Foreign-Born)	18%
Annual Household Income: median USD	$50,000
Covered by Current or Previous Employer	36%
Covered by Any Government Program	35%
Medicare	23%
Medicaid	16%
Veterans Administration	4%
Demographics	
Age (Years)	61.45 (6.53)
Sex (% Male)	43%
% Black	26%
% Hispanic/Latinx	20%
% White	54%
Physical Health	*M* (SD) or %
Self-Rated Health (1 [Excellent] - 5 [Poor])	2.97 (1.08)
Body Mass Index	29.55 (6.62)
# Impaired ADLs	0.46 (1.13)
# Impaired IADLs	0.43 (1.13)
# Chronic Conditions (of 8)	2.09 (1.59)
Ever Diagnosed with ADRD	6%
Ever Diagnosed with a Sleep Disorder	16%
Mental Health & Cognition	*M* (SD) or %
CES-D Total Score	1.59 (2.11)
Felt Lonely (% Yes)	17%
Total Cognition (TICS-M)	NA (n = 139)
Mental Status Summary Score	NA (n = 139)
Total Word Recall	10.34 (3.34)
Immediate Word Recall	5.67 (1.62)
Delayed Word Recall	4.67 (1.94)

Health Behaviors & Healthcare Utilization (Prior 2 Years)	*M* (SD) or %
Ever Smoked Cigarettes	56%
# Days/Week Alcohol Consumption	1.14 (1.84)
Any Physical Activity ≥ Once/Week†	70%
Hospital Stay (% Yes)	22%
# of Hospital Stays	0.55 (2.52)
Nursing Home Stay (% Yes)	5%
# of Nursing Home Stays	0.13 (2.49)
Doctor Visit (% Yes)	88%
# of Doctor Visits	10.12 (24.14)
Dental Visit (% Yes)	64%
Utilized Home Health Care (% Yes)	8%
Received Outpatient Surgery (% Yes)	17%
Regular Use of Prescription Drugs (% Yes)	76%

Note. '†' = Physical activity included vigorous, moderate, or light activities that occurred at least once per week. Household income reflects total income for the last calendar year and is the sum of the participant and spouse earnings, pensions and annuities, Social Security Income and Social Security Disability, Social Security retirement, unemployment and workers compensation, other government transfers, household capital income, and other income. Reported or imputed household income of $0 was set to missing (n = 192) in order for natural-log transformation to occur.

Abbreviations: ADL = Activities of Daily Living. ADRD = Alzheimer's Disease and Related Dementias. CES-D = 8-item Center for Epidemiological Studies-Depression. IADL = Instrumental Activities of Daily Living. TICS-M = Telephone Interview for Cognitive Status – Modified.

Table S2. Prevalence of clinically significant depressive symptomatology by race/ethnicity and by birth cohort

Birth Cohort	White N = 7,244	Black N = 2,306	Hispanic / Latinx N = 1,593
	CES-D ≥ 3 % (n)	CES-D ≥ 3 % (n)	CES-D ≥ 3 % (n)
Silent Generation (1928-1945)	17% (723)	24% (204)	30% (162)
Baby Boomers (1946-1964)	21% (608)	26% (386)	28% (290)

Note. Sample sizes for Silent Generation were 837 Black, 544 Hispanic/Latinx, and 4,298 White. Sample sizes for Baby Boomers were 1,469 Black, 1,049 Hispanic/Latinx, and 2,946 White.