Race and Racism in our Research

RCMAR
January 15, 2021

David Geffen School of Medicine | UCLA Health

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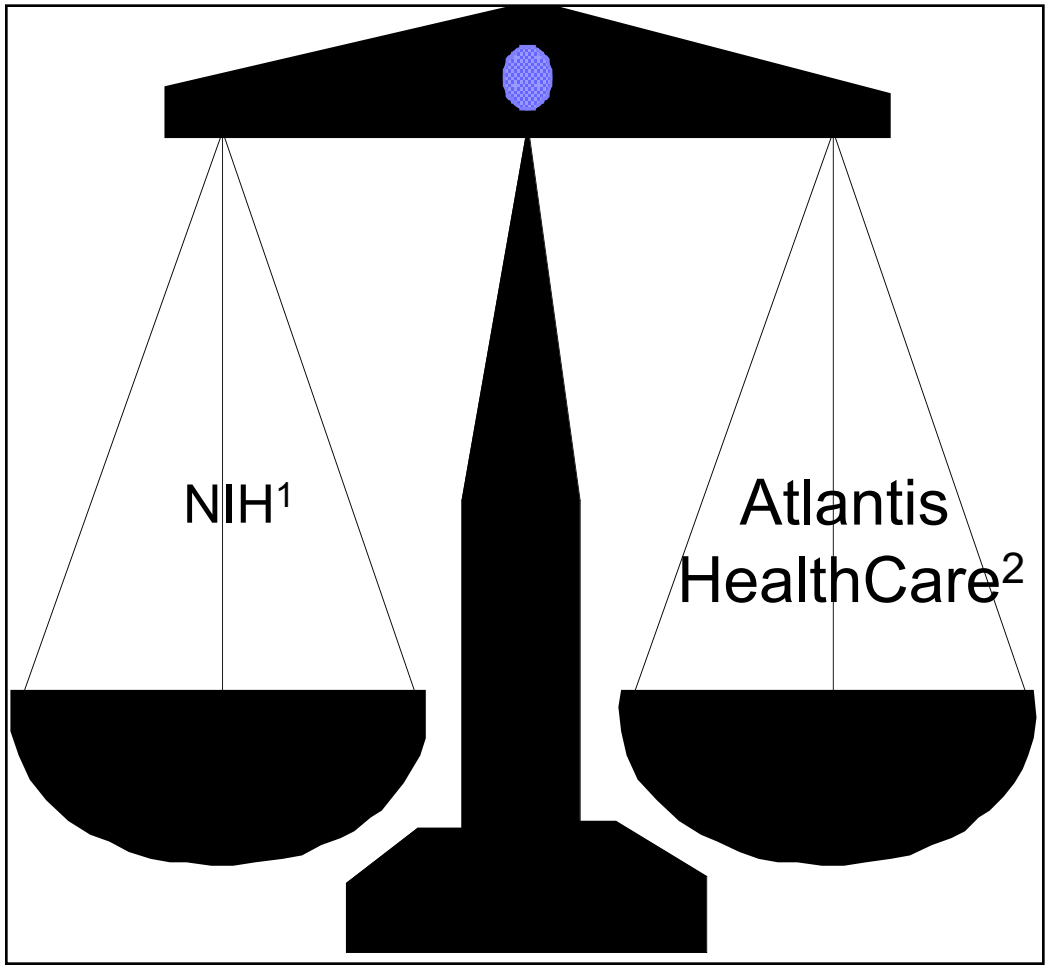
Building.Belonging.Becoming.

Potential Conflicts of Interest*#



* Activities within the last year

Grants: 1

Consulting: 2

None related to this talk

I believe in a society grounded in Equity & Justice

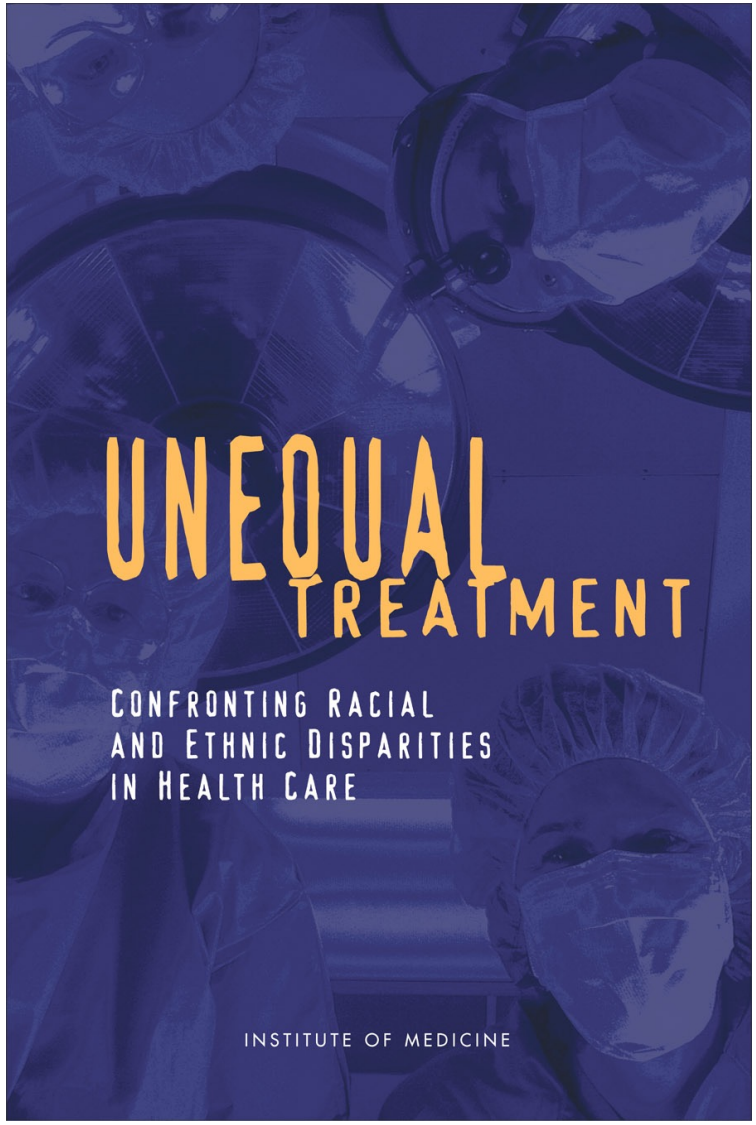
Resource Centers for Minority Aging Research (RCMAR) are designed: (1) to enhance the diversity of the aging research workforce by mentoring promising scientists from under-represented groups for sustained careers in aging research in priority areas of **social, behavioral, and economic research on aging**, and (2) to develop infrastructure to promote advances in these areas while simultaneously increasing the number of **researchers focused on health disparities** and the **health and well-being of minority elders**.

Social Determinants of Health are important for RCMAR. Their inequitable distribution is critical for oppressed minority groups

https://www.nia.nih.gov/research/dbsr/resource-centers-minority-aging-research-rcmar

Race & Racism in Research

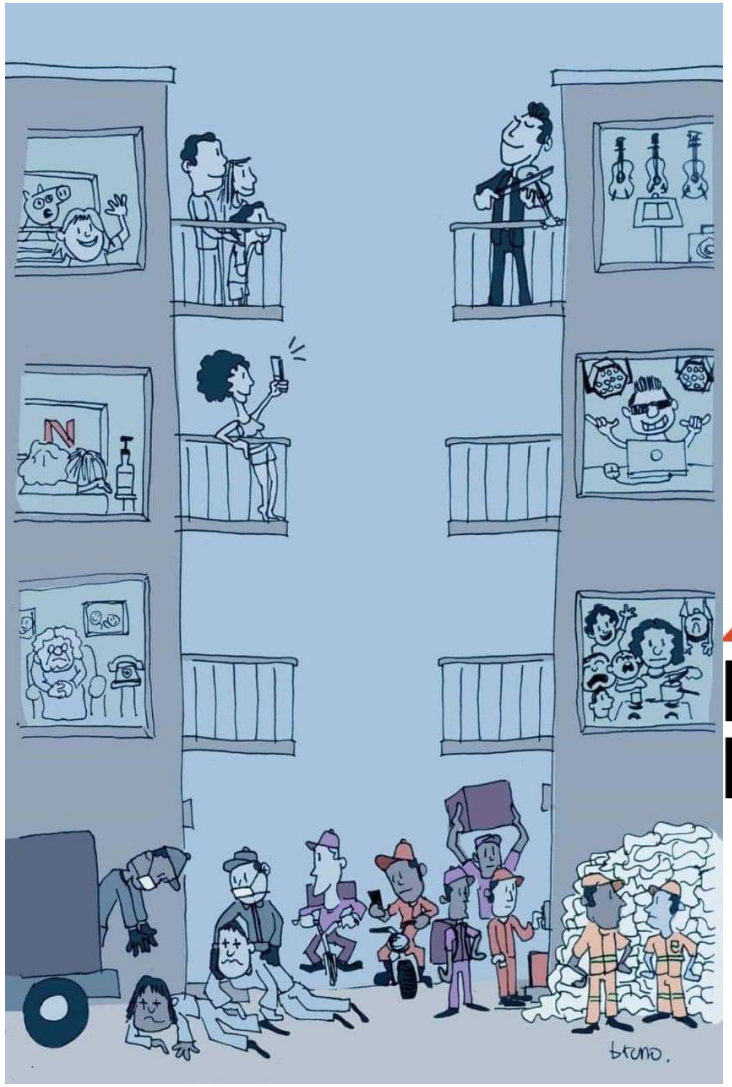
Major Race-Based Inequities Exist in Society & in Medicine that lead to Disparities and Undermine the Optimal Care for All



Race & Racism in Research

Every system is perfectly designed to achieve the results it gets - Don Berwick

Structural Racism and COVID-19



U.S. CORRECTIONAL FACILITIES REPORT STEEP RISE IN CORONAVIRUS INFECTION RATE

BY MEGHAN ROOS ON 4/16/20 AT 6:33 PM EDT

'They're Death Pits': Virus Claims at Least 7,000 Lives in U.S. Nursing Homes

More than six weeks after the first coronavirus deaths in a nursing home, outbreaks unfold across the country. About a fifth of U.S. virus deaths are linked to nursing facilities.

COVID-19: a potential public health problem for homeless populations

CORONAVIRUS

Native American Deaths Rising at Alarming Rate from COVID-19

Covid-19's devastating toll on black and Latino Americans, in one chart

The US health system has failed black and Latino populations for decades. Now they're paying the price.

By Dylan Scott | @dylanlscott | dylan.scott@vox.com | Apr 17, 2020, 4:10pm EDT

A Few Definitions

Race/Ethnicity

- Despite its official status in government, research and health professions, the term race is a misnomer
  - There is only one race, the human race or Homo sapiens - the only extant human species.

- The Pan American Health Organization/WHO holds the scientifically accurate view that there is a single human race and uses ethnicity to characterize different socio-cultural groups.
  - Share traditions, ancestry, language, history, culture, nation, religion, and/or social treatment within a society

Marshall E. DNA studies challenge the meaning of race. *Science (New York, NY).* 1998;282(5389):654-655.
Ethnicity and Health. Pan American Health Organization/World Health Organization.

Creating Race and Racism

- 1684 - Francis Bernier: Racial classification into 4 major groups (American, European, Asian, and African)
- 1735 - Carl Linnaeus, father of modern taxonomy: Socially-constructed, hierarchal groupings establishing the foundation for racism (summarized from *Systema Naturae),*

- **Americanus (American Indian):** obstinate, merry, free, **regulated by customs**
- **Asiaticus (Asian)**: melancholy, avaricious, **ruled by opinions**
- **Africanus (Black)**: women without shame, crafty, indolent, negligent, **governed by caprice.**
- **European (White)**: muscular, gentle, sanguine, inventive, **governed by laws.**

A Few Definitions

- **Race** – a socio-political construct to control power based on how people look (race) and recently expanded to include other ways to separate people (ethnicity - culture/language)
  - Derived from White Supremacy ideology of racial superiority as central in the founding of America and all of its structures and systems (to justify and maintain chattel slavery & Native American genocide/oppression)
  - **As a research variable: poor indicator of biology and strong indicator of exposure to racism**

Race = How society sees you and thinks of you

Jones CP. Confronting Institutionalized Racism. *Phylon.* 2002;50(1/2):7-22.
Bailey ZD, et al. How Structural Racism Works — Racist Policies as a Root Cause of U.S. Racial Health Inequities. New England Journal of Medicine. 2020.

A few Definitions

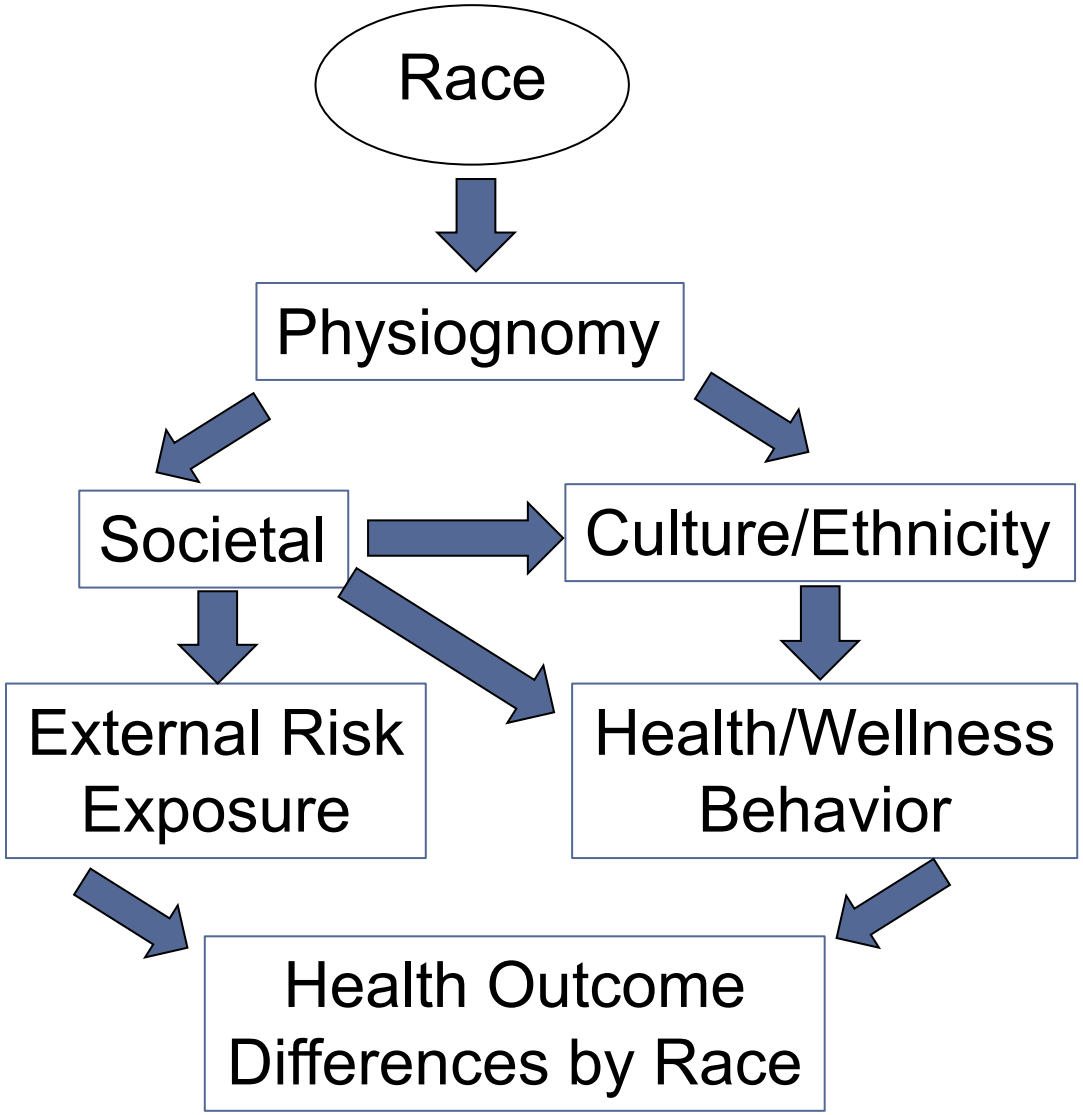
- **Racism**: a system of structuring opportunity and assigning value based on the social interpretation of how one looks (which is what we call "race")
  - Racism by design 1) unfairly disadvantages some individuals/communities, 2) unfairly advantages other individuals/communities, and 3) saps the strength of the whole society through the waste of human resources.

Racism = What society does to you based on how it sees you

Jones CP. Confronting Institutionalized Racism. *Phylon.* 2002;50(1/2):7-22.
Jones CP. Levels of racism: a theoretic framework and a gardener's tale. *Am J Public Health*. Aug 2000;90(8):1212-5.

What About Race and Ethnicity in Research?

Conceptual Model of Race in Research



Latent (unobserved factor)

Manifest indicator (Skin Color)

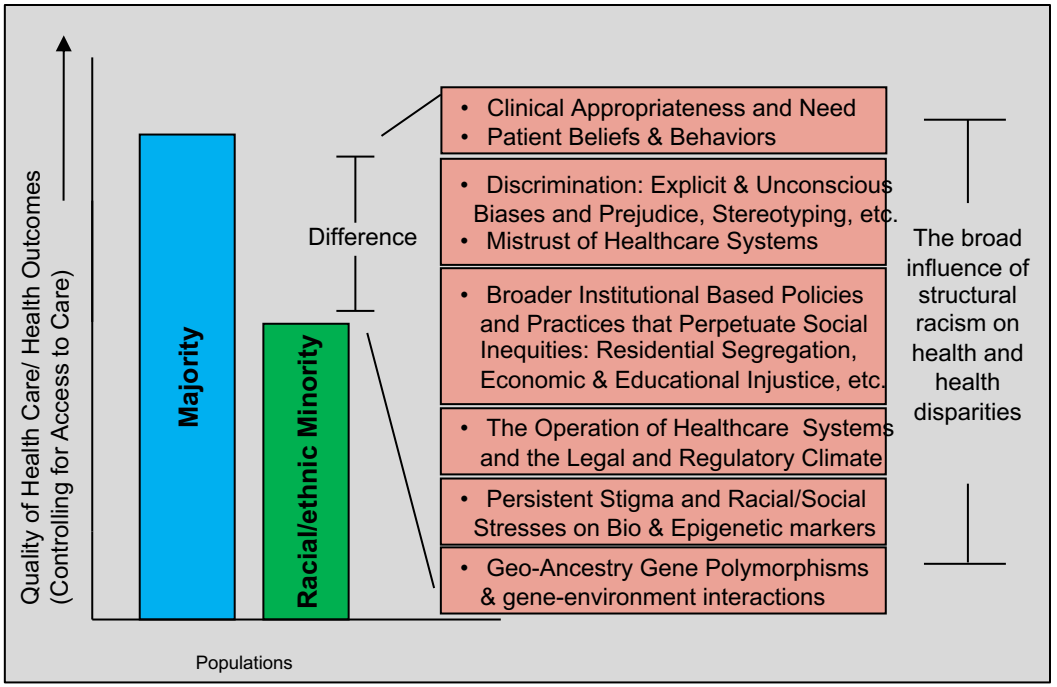
Categorization into risk/behavior groups

Risk Exposure

Health Outcome

Adapted from La Veist TA. Why we should continue to study race...but do a better job: an essay on race, racism and health. Ethnicity & Disease. 1996;6(1-2):21-9.

- Defining Disparities - Differences in clinical outcomes
  - ***Race/Ethnicity, gender/*sex, age**, geography, religion, etc
  - *Genetic*, physiologic, *socio-cultural*
- Opportunity to understand diverse factors that influence disease mechanisms and treatment response –
  - E.g. more is not always better
- **? Just or equitable**
  - Unjust is usually due to man made beliefs & systems
  - Institutionalized racism; residential segregation, stereotype threat, etc.



Adapted from Smedley BD, et al. National Academy Press, 2003
Norris K and Nissenson AR. J Am Soc Nephrol. 2008

Health Disparities research

- **Comparing Racial and Ethnic Groups**
- Mitchell UA, et al. Change in Cardiometabolic Risk **Among Blacks, Whites, and Hispanics**: Findings From the Health and Retirement Study. J Gerontol A Biol Sci Med Sci. 2019 Jan 16;74(2):240-246.

- **Minority health research**
  - **Analyses Within a Racial and Ethnic Group**
  - Thorpe RJ et al. The Association Between Depressive Symptoms and Accumulation of Stress **Among Black Men** in the Health and Retirement Study. Innov Aging. 2020 Sep 29;4(5). (accumulation of stress using allostatic load)
  - Cadet T, et al. Timing of Immigration Effects Asset Change **Among Hispanic Caregivers** of Older Family Members. J Fam Econ Issues. 2020 Oct 6:1-12.

On racism: a new standard for publishing on racial health inequities

- Define race during the experimental design, and specify the reason for its use in the study.
- Name racism
  - Identify the mechanism (interpersonal, institutional, or internalized) by which it may be operating, and other intersecting forms of oppression (e.g. sex, sexual orientation, age, nationality, religion, or income) that may compound its effects.
  - Naming racism explicitly helps authors avoid incorrectly assigning race as a risk factor racially disparate outcomes, when racism is the risk factor for racially disparate outcomes.

Boyd RW, Lindo EG, Weeks LD, McLemore MR. On racism: a new standard for publishing on racial health inequities. Health Affairs Blog. 2020 Jul 2;10.

On racism: a new standard for publishing on racial health inequities

- If race and genetics are being expressed jointly, painstakingly delineate the intended implication.
  - *Never offer genetic interpretations of race* because such suppositions are not grounded in science
- *Solicit patient input* to ensure the outcomes of research reflect the priorities of the populations studied.
- *Identify the stakes*. Research on R/E health inequities has broad implications for public policy and clinical practice.
- *Cite the experts*

Boyd RW, Lindo EG, Weeks LD, McLemore MR. On racism: a new standard for publishing on racial health inequities. Health Affairs Blog. 2020 Jul 2;10.

Words Matter

- Many terms have changed over time (most recently with the social and racial justice movements) and there is a need to better harmonize medical sciences with social sciences in order to avoid subtle narratives that reinforce racist ideologies, etc.

Try to careful with language and racialized rhetoric

- **Segregated** (as a descriptor for the methods/processes used in mixed methods syntheses) vs **partitioned** or **segmented**
- Human Subjects vs participants
- Target population vs population of interest
- Underserved vs. underresourced
- Using black/white vs Black/White (even grammatically proper nouns should be capitalized)

- Push back on narratives for not changing
  - There is no better alternative language, science is "race neutral, the language reflects the literature, There is no better alternative language, Racializing rhetoric in other fields doesn't apply in mine

Fetters M.D, et al. (2021). Words matter: Calling on the community of research to recognize, react to and remove racializing research rhetoric. Journal of Mixed Methods Research, 15(1), 6-17

Thinking About our Research

Preparing our research

1. Do we understand what race or ethnicity means to us in the study?
   - **Is there an intersectional lens (sex, linguistic background, sexual orientation, SES, other?)**
2. Do we have the right partners ?
   - **Who is not at the table?**
3. Have we thought through the impact of structural racism in the translation to providers, health systems, etc. and how it manifests in heterogeneous populations and diverse communities?

Adapted from McNulty M,, et al. Implementation Research Methodologies for Achieving Scientific Equity and Health Equity. Ethnicity & Disease. 2019;29(Suppl 1):83-92.

Considerations for R/E Disparities in Aging Research

- **Think how and why we are examining race/ethnicity**
- Substantial heterogeneity in each R/E group

- **Understand the impact of structural racism**
- Race/Ethnicity are **not** surrogates for SES
- Race is a risk factor for racism
- Exposure to racism is risk factor for health disparities

Considerations for R/E Disparities in Aging Research

- Qualitative research including community engaged research to better contextualize findings
- Historically greater likelihood of R/E minorities to be uninsured (may still be underinsured) than their White peers - attenuated with the ACA (2010)
  - Insurance does **not** = access to care
  - Insurance = potential access to care
    - Narrow networks, historical mistreatment, job, transportation, etc. still impact actual access to care

Considerations for R/E Disparities in Aging Research

- Medicare analyses (mostly >65): at least recent "equity" in access to care
  - survivor bias, consider controlling for allostatic load/weathering
- Medicaid analyses: represents potential "equity" in access for low-income older populations (and children)
- Closed health system - Kaiser, VA (intrinsic biases in the mix of patients and > equity in care)
- Open health systems – large EHR data; more generalizable
- Large Observational Datasets:
  - National Health and Nutrition Examination Survey (NHANES), National Health Interview Survey (NHIS), National Inpatient Sample (NIS), Medical Expenditure Panel Survey (MEPS), Health and Retirement Study (HRS)

We often try to capture structural racism by controlling for community level factors/social determinants of health

We can't control for psychologic impact, life course or intergenerational trauma. We use allostatic load and immune/stress & epigenetic markers to gain more insight into the physiologic affects of these

Census Block Components "Socioeconomic Disadvantage or Area Deprivation Index" - now CDC Social Vulnerability Index (*Maybe Area or Social Inequity or Oppression Index*)

- Educational attainment
- Unemployment
- employed white-collar jobs
- Median family income
- Income disparity
- home value
- gross rent
- monthly mortgagee
- home ownership

- % families < poverty level
- % population <150% FPL
- % single-parent households
- % occupied housing units without
  - a motor vehicle
  - a telephone
  - complete plumbing
- % occupied housing units with > one person/room

Kind AJ, et al. Neighborhood socioeconomic disadvantage and 30-day rehospitalization: An Analysis of Medicare Data. *Ann Intern Med*. 2014;161(11):765-774.

The Biology of Racism

Society ◄► Structural Racism
Inequity in resources and opportunities
Personal Experiences with discrimination and racism
Health inequities and subsequent impact

Biological "Weathering"

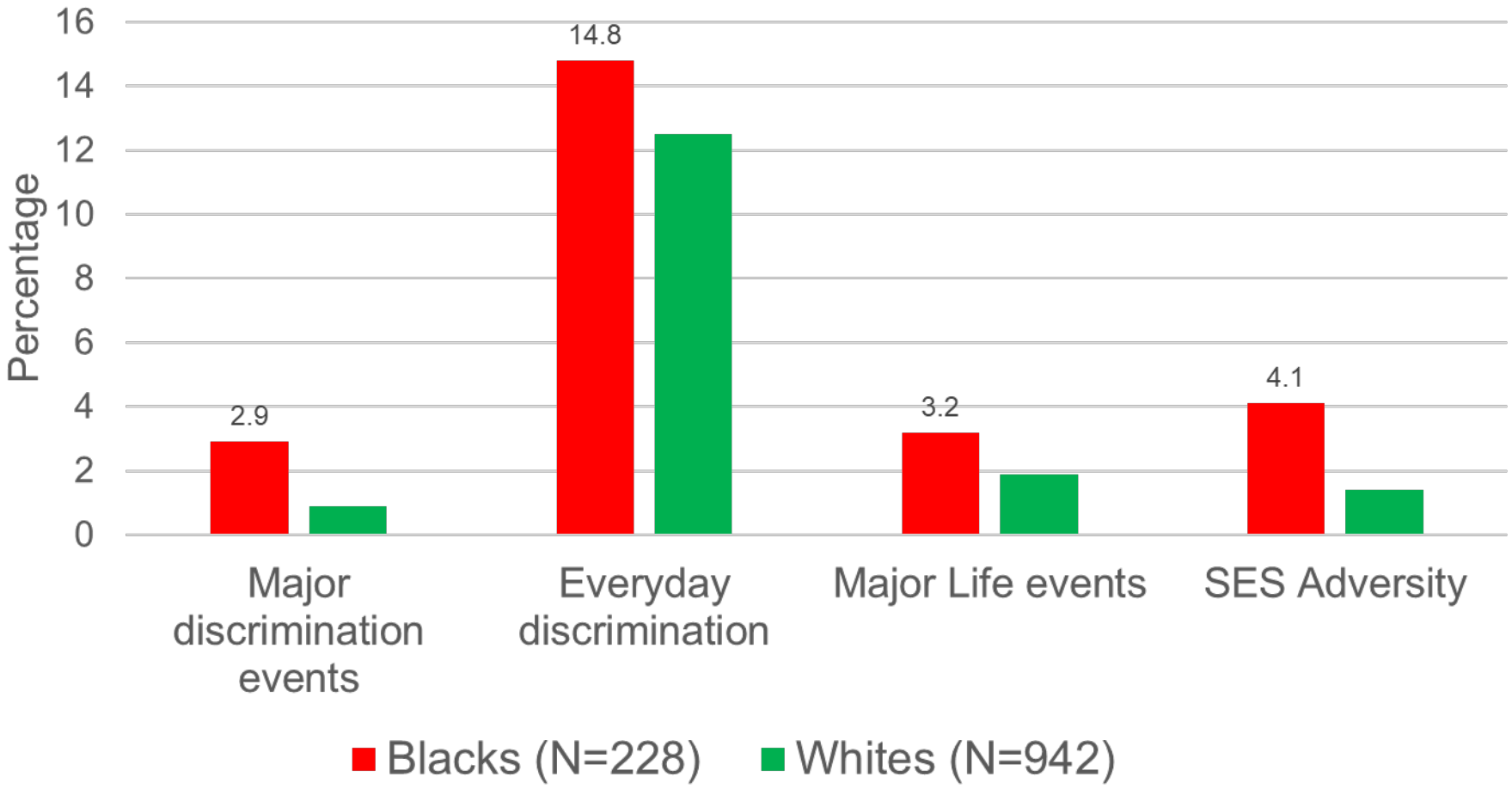
Weathering

"Blacks experience early health deterioration as a consequence of the **cumulative impact of repeated experience with social and/or economic adversity and political marginalization**. On a physiological level, persistent, high-effort coping with acute and chronic stressors has a profound impact on health"

Arline Geronimus

The Aging of the President

Black vs White Differences in Adult Adversity

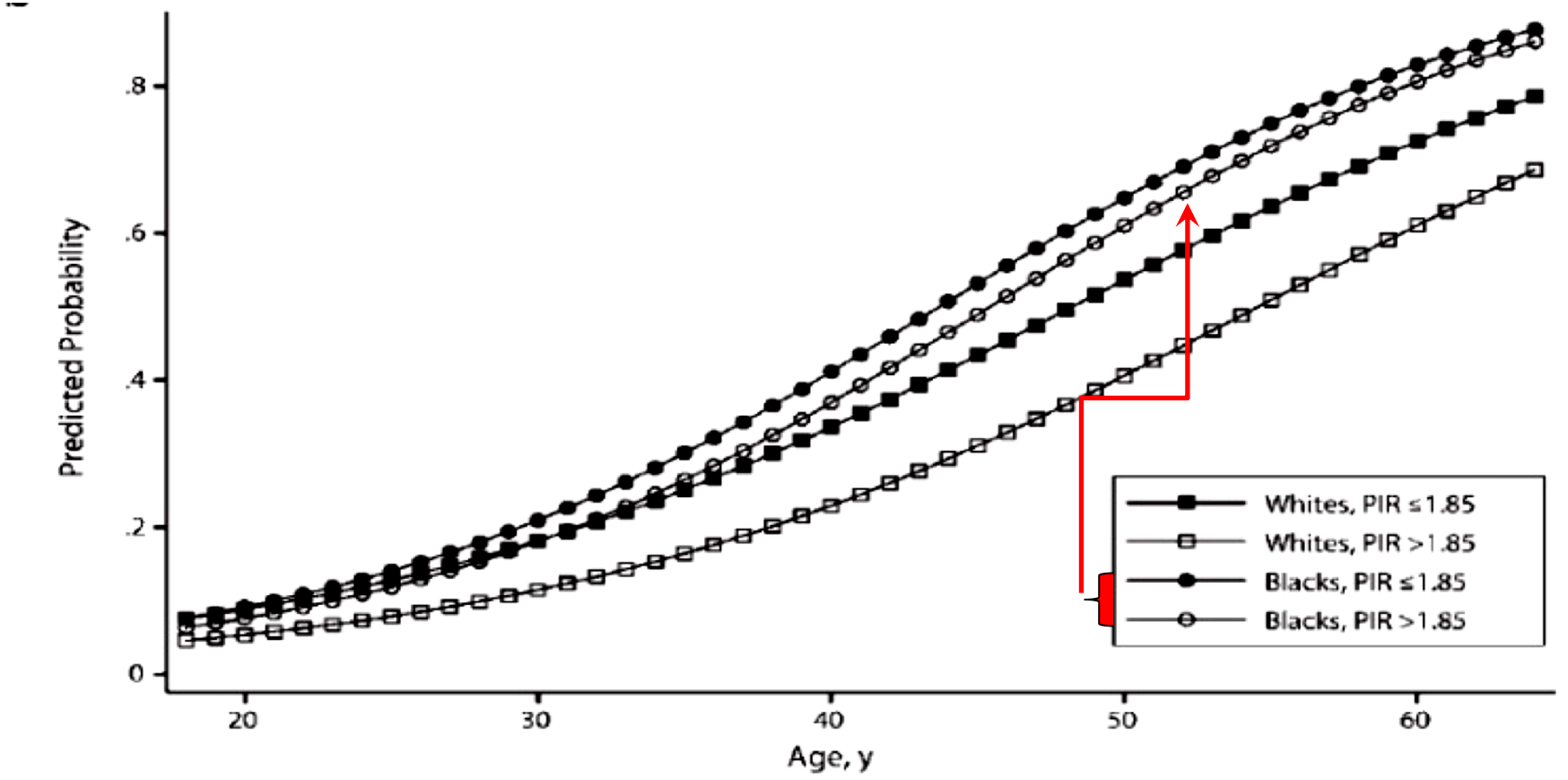


MIDUS - Courtesy Dr. Teresa Seeman

Differential Weathering in the MIDUS Cohort (ages 35-85)

	Black participants (n-228; avg age=53)	White participants (n=942; avg age=58)	Race Difference
Fasting glucose (mg/dL)	**111.1±42.3**	99.9±23.4	<.001
HOMA-IR	**1.5±0.64**	1.3±0.55	<.001
CRP (ug/dL)	**1.34±0.80**	1.0±0.68	<.001
Il-6 (pg/mL)	**1.5±0.54**	1.2±0.51	<.001
E-selectin (ng/mL)	**52.1±28.9**	41.3±20.6	<.001
Waist	**101.4±18.1**	96.5±15.7	<.001
BMI	**32.8±8.6**	29.0±5.9	<.001

Poverty and Allostatic Load

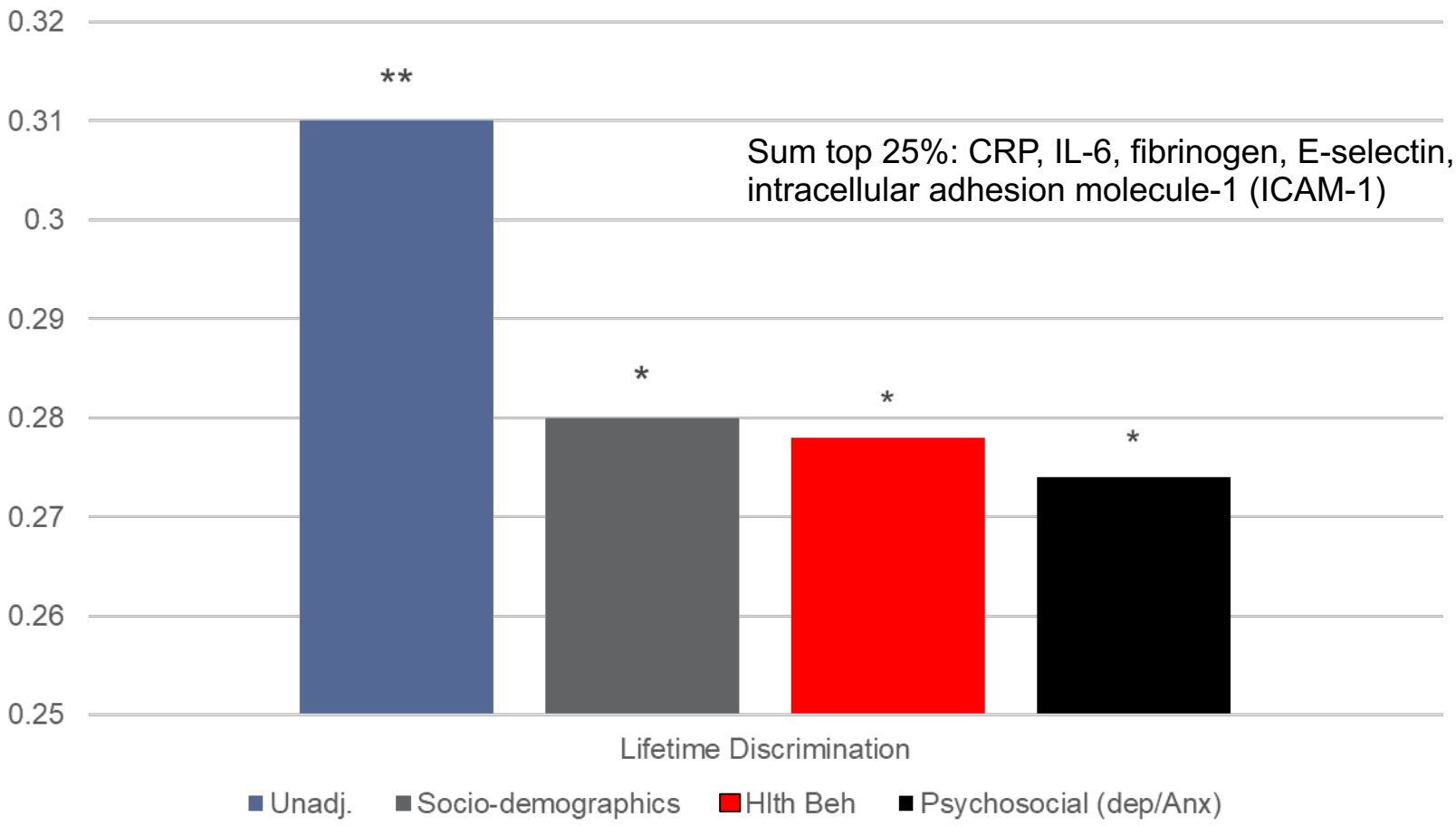


Note. PIR = poverty income ratio.

FIGURE 2—Probability of having an allostatic load of 4 or higher, as predicted by poverty income ratio (a) and poverty income ratio and race (b).

Geronimus AT, et al. "Weathering" and age patterns of allostatic load scores among blacks and whites in the United States. *Am J Public Health*. 2006;96(5):826-833.

Lifetime Discrimination & Inflammation Burden*in Adults: Mid-Life in the US (MIDUS)



(Ong et al, 2019)

Adverse Childhood Experience Questionnaire for Adults

1. Did you feel that you didn't have enough to eat, had to wear dirty clothes, or had no one to protect or take care of you?
2. Did you lose a parent through divorce, abandonment, death, or other reason?
3. Did you live with anyone who was depressed, mentally ill, or attempted suicide?
4. Did you live with anyone who had a problem with drinking or using drugs, including prescription drugs?
5. Did your parents or adults in your home ever hit, punch, beat, or threaten to harm each other?
6. Did you live with anyone who went to jail or prison?
7. Did a parent or adult in your home ever swear at you, insult you, or put you down?
8. Did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way?
9. Did you feel that no one in your family loved you or thought you were special?
10. Did you experience unwanted sexual contact (such as fondling or oral/anal/vaginal intercourse/penetration)?

Adverse Childhood Experience Questionnaire for Adults

- 61% of adults had at least one ACE & 16% ≥ 4
  - Females and several racial/ethnic minority groups were at greater risk for experiencing ≥ 4 ACEs.

- Persons who had experienced ≥ 4 ACE compared to those who experienced none had:
  - 2-5 fold increase in obesity, cancer, diabetes, heart disease, drug abuse, depression, and suicide attempt independent of race/ethnicity, sex, and age

It's not what's wrong with you or them it's what happened to you or to them

Summary

Racism can affect not only communities but biology as well as health beliefs, behaviors and practices

This is critical for understanding the potential role of "race" as a "variable" or "exposure" in multi-level modeling.

Use of race and ethnicity in Medicine

- Research data on R/E is critical for group level assessments that inform public health and community messaging, screening, monitoring progress in addressing disparities, modifying systems, creating policy recommendations, etc.
- It can also be used to create greater awareness of group level risk for providers, recognizing that the group level differences are driven almost entirely by socio-political factors.

Racism, Racial Residential Segregation and Health

- To evaluate the association between racial residential segregation, a prominent manifestation of systemic racism, and the White-Black survival gap in a contemporary cohort of adults, and to assess the extent to which socioeconomic inequality explains this association.
- Cross sectional study of White and Black men and women aged 35–75 living in 102 large US Core Based Statistical Areas (CBSA). The main outcome was the White-Black survival gap.
  - They used 2009–2013 CDC mortality data for Black and White men and women to calculate age-, sex- and race adjusted White and Black mortality rates. They **measured segregation** using the Dissimilarity index, obtained from the Manhattan Institute. They used the 2009– 2013 American Community Survey to define indicators of **socioeconomic inequality**. They estimated the CBSA-level White–Black gap in probability of survival using sequential linear regression models accounting for the CBSA dissimilarity index and race-specific SES indicators (CBSAs collectively represent both metropolitan and micropolitan areas in the United States).

Popescu I, Duffy E, Mendelsohn J, Escarce JJ. Racial residential segregation, socioeconomic disparities, and the White-Black survival gap. PloS one. 2018;13(2):e0193222.

Are we using race and ethnicity with care in our research?

Let's look at an example

Racism, Racial Residential Segregation and Health

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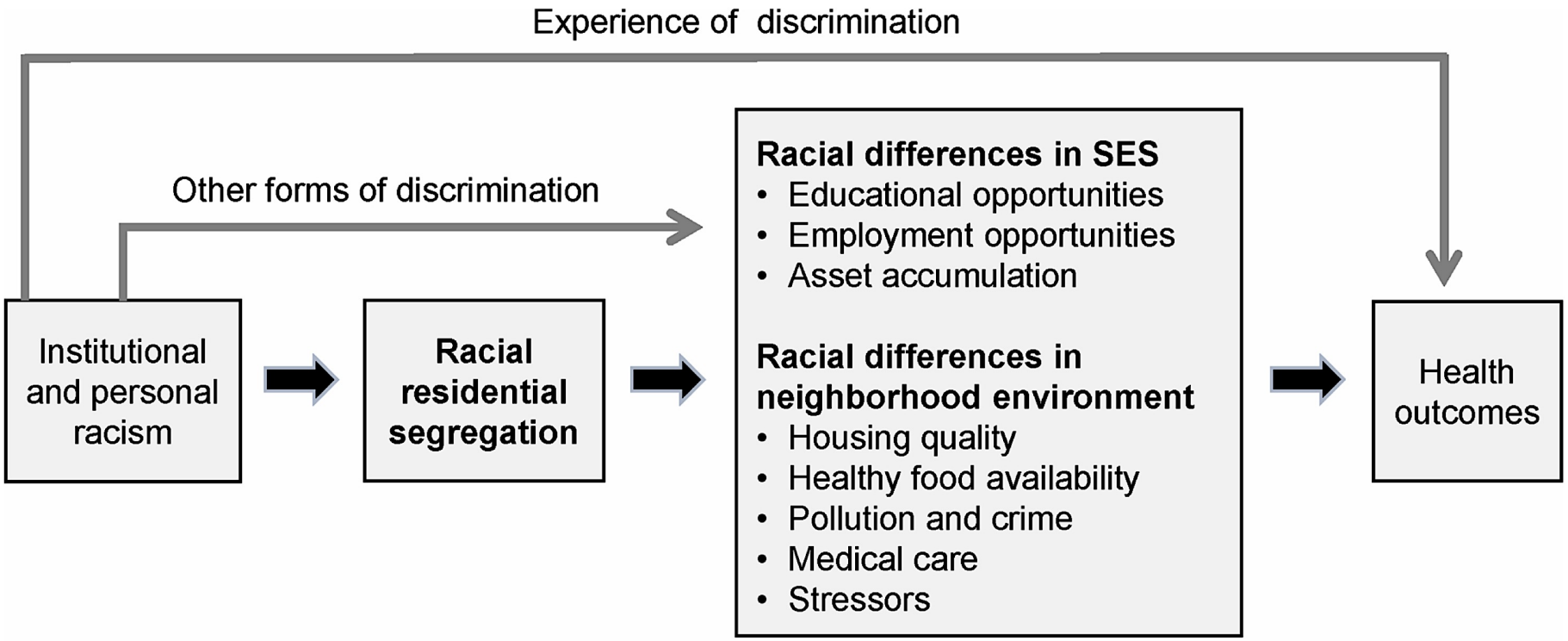
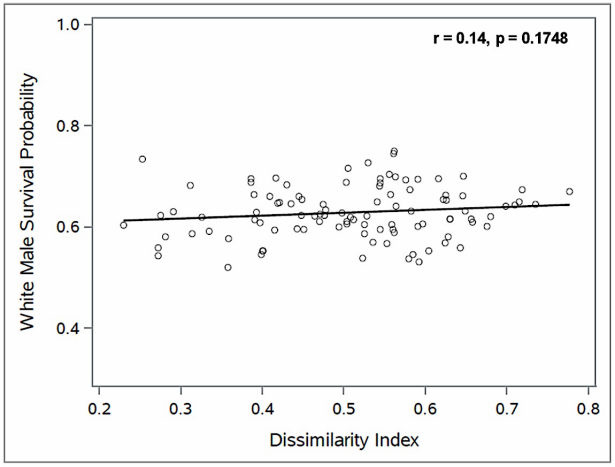
Racism, Racial Residential Segregation and Health

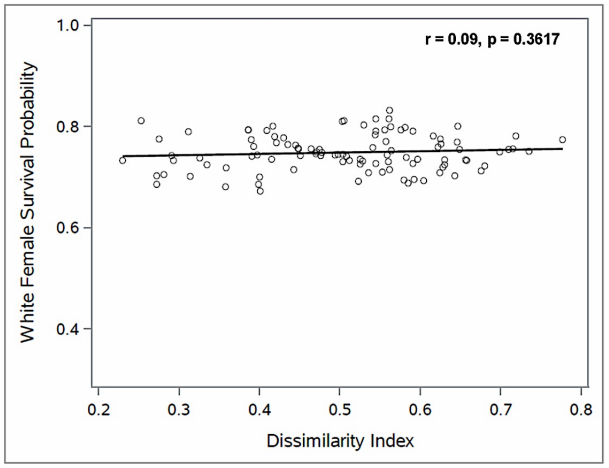


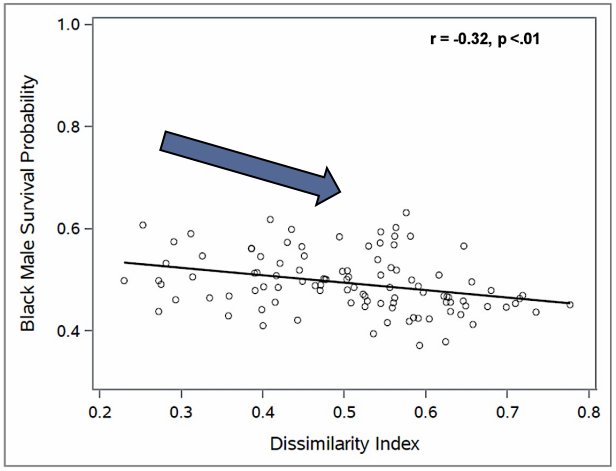
High levels of residential dissimilarity signify that Blacks and Whites have little common area of residence within the CBSA, and, the more spatially separated Blacks and Whites are within a CBSA, the more likely they are to lead separate lives in neighborhoods increasingly different in quality and in access to influence and resources

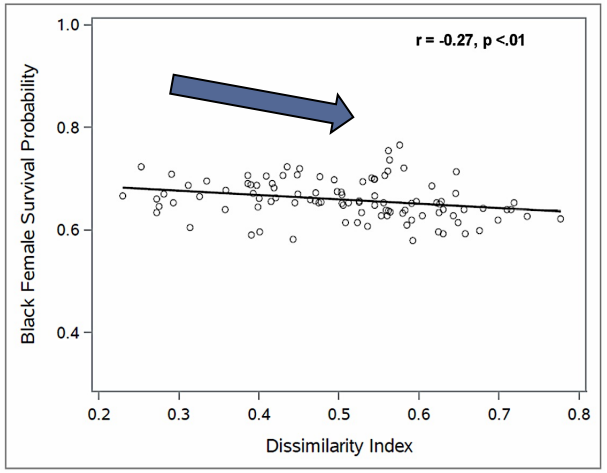
Popescu I, Duffy E, Mendelsohn J, Escarce JJ. Racial residential segregation, socioeconomic disparities, and the White-Black survival gap. PloS one. 2018;13(2):e0193222.

The relationship between racial residential segregation and the probability of survival for Black and White individuals from 35 to 75.









The probability of survival was uncorrelated with the dissimilarity index for White men and women,

White-Black survival gap was substantially greater in more segregated compared with less segregated CBSAs

At low level of dissimilarity Black-White survival differences are small

David Geffen School of Medicine

Popescu I, Duffy E, Mendelsohn J, Escarce JJ. Racial residential segregation, socioeconomic disparities, and the White-Black survival gap. PloS one. 2018;13(2):e0193222.

UCLA Health

Racism, Racial Residential Segregation and Survival: Conclusion

- Black men and women had a 14% and 9% lower probability of survival (age 35-75) than their White peers.
  - Residential segregation was strongly associated with the survival gap, and this was only partly, explained by SES inequality.
  - At the lowest observed level of segregation, and with the Black SES assumed to be at the White SES level scenario, the survival gap is essentially eliminated
- White-Black survival differences remain despite public health efforts to improve life expectancy and initiatives to reduce health disparities.

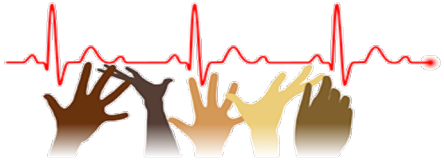
Eliminating racial residential segregation and bringing Black SES to White SES levels could eliminate the White-Black survival gap.

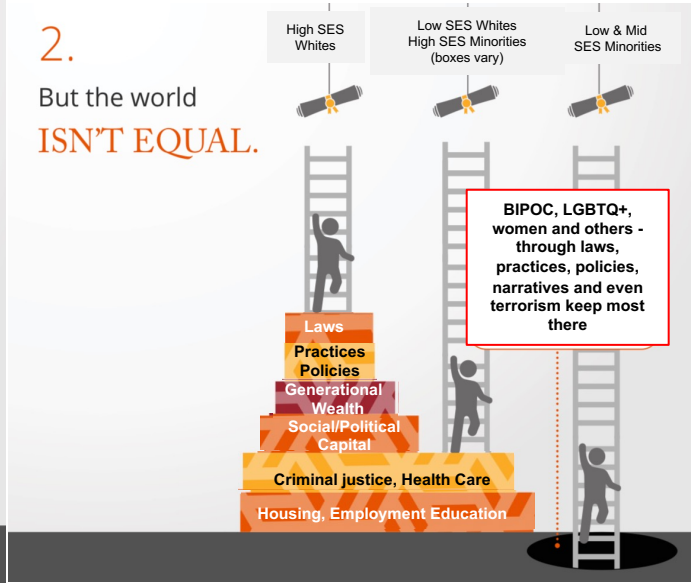
Popescu I, Duffy E, Mendelsohn J, Escarce JJ. Racial residential segregation, socioeconomic disparities, and the White-Black survival gap. PloS one. 2018;13(2):e0193222.

Did this paper meet the standard for publishing on racial health inequities?

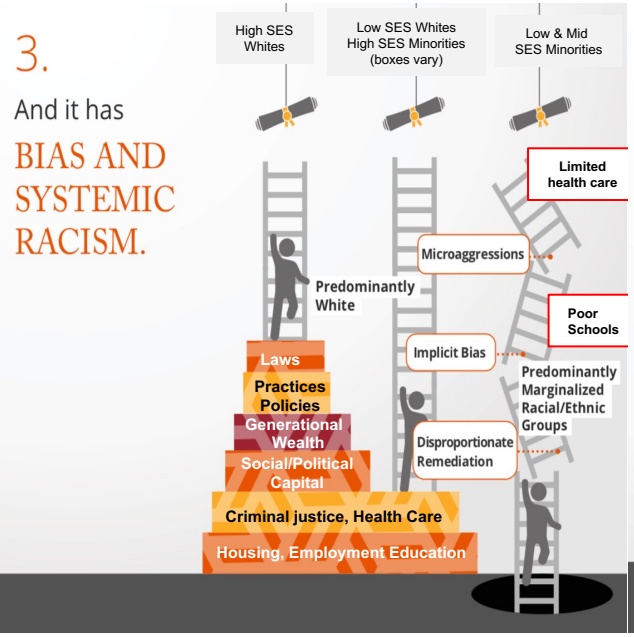
- Specified the reason for using race.
- Named multiple forms of racism and discrimination
- Identified policy implications and cited experts

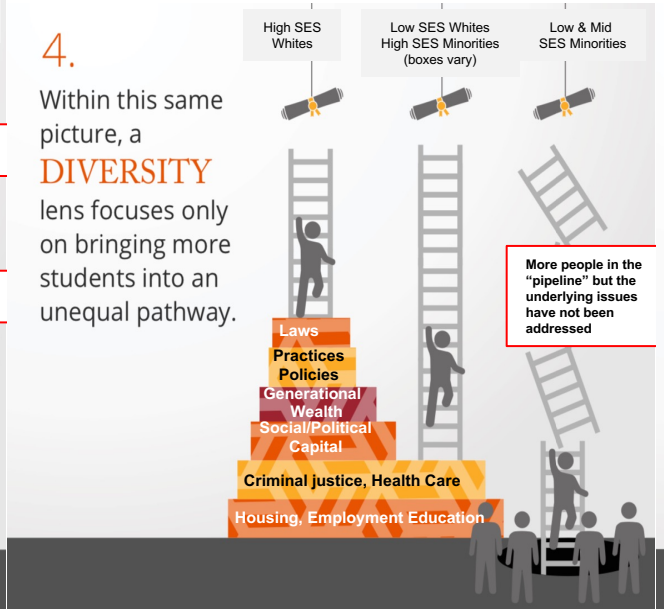
Towards Achieving Equity and Justice to Eliminate Disparities



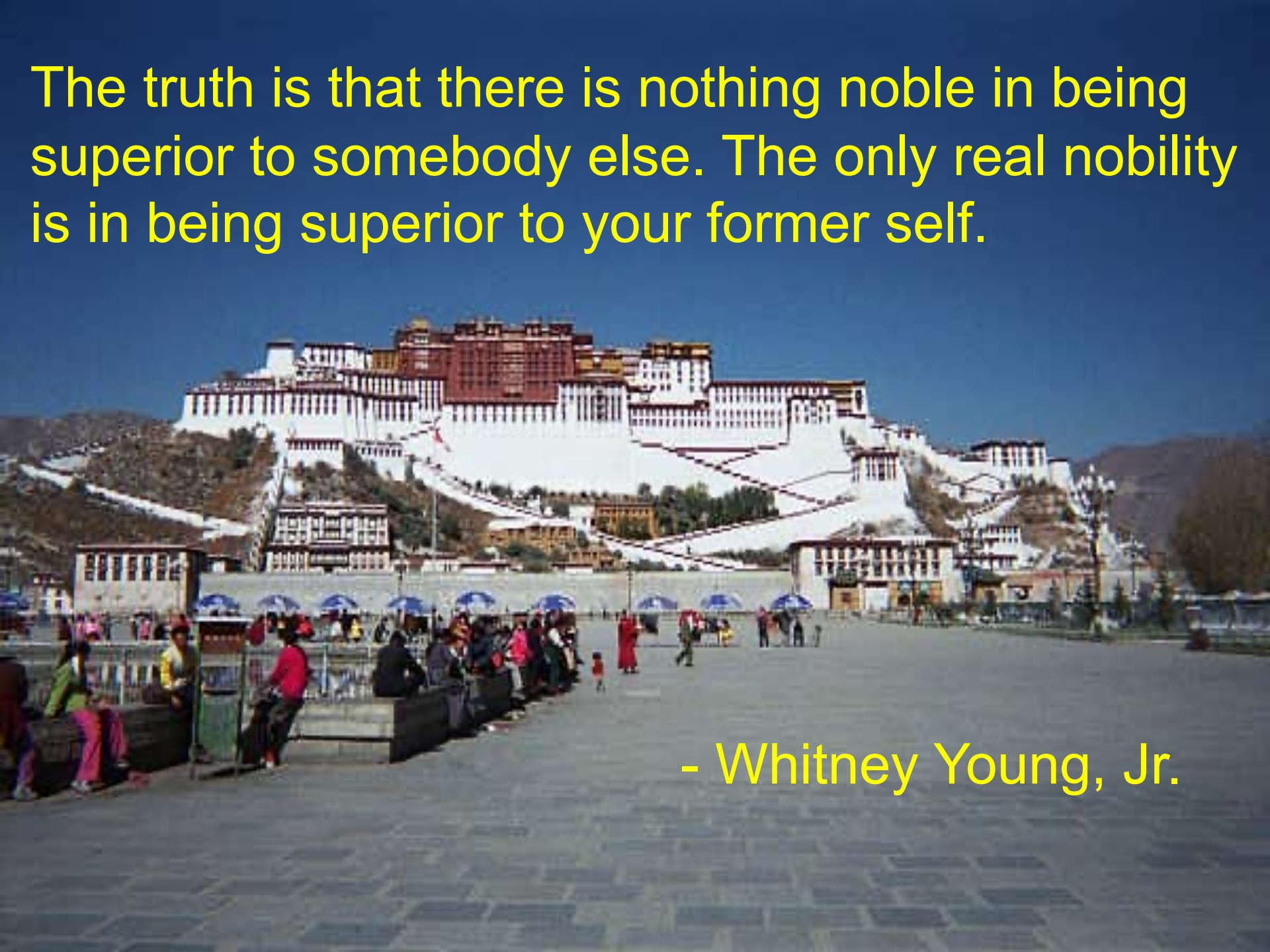


Adapted from the USC Center for Urban Education





The truth is that there is nothing noble in being superior to somebody else. The only real nobility is in being superior to your former self.



- Whitney Young, Jr.