Race and Racism in our Research

RCMAR

January 15, 2021

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

BY MEGHAN ROOS ON 4/16/20 AT 6:23 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

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 | @dylaniscott | 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.
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
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

What About Race and Ethnicity in Research?
Conceptual Model of Race in Research

Race

Physiognomy

Societal

Culture/Ethnicity

External Risk Exposure

Health/Wellness Behavior

Health Outcome

Differences by Race

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.

Health Disparities research

• Comparing Racial and Ethnic Groups

• 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)
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.

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*

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?

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

The Biology of Racism

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

Arlene Geronimus
Black vs White Differences in Adult Adversity

MIDUS - Courtesy Dr. Teresa Seeman
## Differential Weathering in the MIDUS Cohort (ages 35-85)

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

Courtesy Dr. Teresa Seeman
Poverty and Allostatic Load


**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).

*Note.* PIR = poverty income ratio.
Lifetime Discrimination & Inflammation Burden* in Adults: Mid-Life in the US (MIDUS)

Sum top 25%: CRP, IL-6, fibrinogen, E-selectin, intracellular adhesion molecule-1 (ICAM-1)

*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).

Are we using race and ethnicity with care in our research?
Let’s look at an example
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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.
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.

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.

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

1. Equality imagines an equal world. "I care about all students equally"

3. And it has BIAS AND SYSTEMIC RACISM.

4. Within this same picture, a DIVERSITY lens focuses only on bringing more students into an unequal pathway.

5. In contrast, EQUITY redirects resources to the pathways with greatest need to fix barriers and intentionally provide support.

& Justice closes the hole and starts adding some boxes.

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.