Race and racial disparities in health and health care - 2010
### How does race impact health?

**Berkman, Glass, Brissette, Seeman model**

<table>
<thead>
<tr>
<th>Upstream</th>
<th>Downstream</th>
<th>Environment (real and perceived)</th>
<th>Individual</th>
<th>Behaviors</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Macro</td>
<td>Mezzo</td>
<td>Micro</td>
<td>Brain mechanisms</td>
<td>Self-perceptions that influence internal states</td>
<td>Behaviors</td>
</tr>
<tr>
<td>Culture</td>
<td>Social networks structure</td>
<td>Social support</td>
<td>Emotional filters</td>
<td>Self-efficacy</td>
<td>Risk or harm behaviors</td>
</tr>
<tr>
<td>Socio-economic factors</td>
<td>Characteristics of network ties</td>
<td>Interpersonal influence</td>
<td>Cognitive filters</td>
<td>Narrative coherence, meaning, identity, well-being</td>
<td>Protective or healthful behaviors</td>
</tr>
<tr>
<td>Political structure and policies</td>
<td>Opportunities for engagement attachment</td>
<td>Opportunities for engagement attachment</td>
<td>Mechanisms of social learning and influence</td>
<td>Cognitive assessments</td>
<td></td>
</tr>
<tr>
<td>Rapid transitions in any of the above</td>
<td>Access to resources</td>
<td>Temperament or personality</td>
<td>All the above influence internal regulatory states and affect</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Media</td>
<td></td>
<td>Person-to-person transmission</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Outline

- Definitions
- “Race” from a “self-evident” and scientific basis
- The impact of race at the structural level – putting bounds on social networks and opportunities
- The impact of race on social cognition (micro)
- Race and public health research
Racial disparities in health in the US

• US African-Americans have higher rates than Whites for 13 of 15 leading causes of death
• Life expectancy at birth
  – Female AA: 74.7; White 79.9
  – Male AA 67.2; White 74.3
• Accounting for poverty reduces some but not all differences
Depression scores among the advantaged and disadvantage

• See Figure 1 and Figure 2 from Walsemann KM, et al. Ethnic differences in trajectories of depressive symptoms. Health Soc Behav. 2009 March; 50(1): 82–98.
Definitions

• Race: original definition – “shared biologic origin”
  – Considered “self-evident” in European scientific tradition, a “natural fact” that there was a hierarchy of types of humans endowed with different strengths and weaknesses
Definitions

Ethnicity: label given to a group of people with a shared language, history, and national origin

Ethnicity: label given to a group of people with a shared “culture” (set of shared beliefs, attitudes, values, behaviors)
## FALL 2009 ENROLLMENT BY ETHNICITY* AND GENDER (HEADCOUNT)

<table>
<thead>
<tr>
<th></th>
<th>Amer. Native</th>
<th>Asian</th>
<th>Black</th>
<th>Caucasian</th>
<th>Hispanic</th>
<th>Other/multi-racial</th>
<th>Unknown</th>
<th>Total</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>14</td>
<td>81</td>
<td>32</td>
<td>451</td>
<td>54</td>
<td>22</td>
<td>153</td>
<td>807</td>
<td>54%</td>
</tr>
<tr>
<td>Men</td>
<td>3</td>
<td>75</td>
<td>30</td>
<td>372</td>
<td>56</td>
<td>21</td>
<td>117</td>
<td>674</td>
<td>46%</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>156</td>
<td>62</td>
<td>823</td>
<td>110</td>
<td>43</td>
<td>270</td>
<td>1,481</td>
<td>100%</td>
</tr>
<tr>
<td>Percent</td>
<td>1%</td>
<td>11%</td>
<td>4%</td>
<td>56%</td>
<td>7%</td>
<td>3%</td>
<td>18%</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

*Includes domestic and international student ethnicity.
History of racial classification in the US

• 1790-1840
  - Constitution mandated a census to assure equal representation in new government
  - Enumeration based on status as free or slave and thus whether paid taxes; race not important to representation
  - Categories
    - Free white males and females
    - Anyone else who was free regardless of color
    - Slaves
    - Indians
Who counted in 1790

- All free persons regardless of race = 1
- Slaves = 3/5 person
- Indians = 0 (not taxed)

- But why the distinction between white and not-white free (though counted the same)
  - Nobles: “natural fact” ?; otherwise not clear
“Scientific” era – 1850-1920

• Theory of “polygenism”
  – Races distinct and unequal, separate origins
  – Mixtures would be unfertile, unfit
  – “Lesser” races dominant and mixtures would eventually “revert” to them over generations
“Scientific” era – 1850-1920

• Pressure to use Census to investigate polygenetic hypotheses
  – First developed “mulatto”
    (any perceptible trace of African blood)
  – Later expanded to “quadroon,” “octroon”
    to further estimate amount and type of mixture
  – US Indians now counted to measure disappearance (thought to be proof of their inferiority)
1930-1960

- Social changes
  - Beginnings of Civil Rights movement
  - Nazi atrocities committed in name of race
- Scientific advances
  - Race-related differences considered in medical care (prevalence of sickle cell disease, other hemoglobinopathies)
• Classifications “simplified”
  – White [not defined, anything not something else]
  – Non-white [includes obvious “other” and any mixture of “other” and white]
Civil Rights Era to now

- Civil Rights Act of 1964, Voting Rights Act of 1965 make segregation and discrimination illegal
  - But now need to measure “race” to ensure enforcement
  - ‘Hispanic’ added as an “ethnicity” (not “race”)
  - ‘White’ still seen as homogeneous entity
  - “Asian” categories expanded
Gene-c variation among populations that appear different

- Variants present in one population are generally present but not necessarily as common in other populations
- *Geographic* ancestry rather than appearance seems to be the best determinant of the likelihood that someone has a given gene
  - *Geographic* ancestry and knowledge of genetic diversity in that specific region of the world relates to genetic risks
- Relationship of appearance to geographic ancestry varies with the amount of migration over time (e.g., Scandinavia highly correlated versus Spain poorly correlated)
- So maybe “biogeographic ancestry” is a more useful way of gauging possible clinical/public health significance in risks and protective factors
Network of Genetic Relatedness and Examples of Genetic Distance

- **European Americans** (N=20)
- **African Americans** (N=20)
- **Asian Americans** (N=19)

Genetic Distance Between Individuals Within the Same Population

Genetic Distance Between Individuals From Different Populations

Adapted by CTLT from Bamshad, M. JAMA 2005;294:937-936.
2002 Baltimore City Census Tracts by Racial Composition

**Yellow dots** = scattered site public housing

**Green dots/squares** = public or elderly housing with 50% or more Black residents

**Red crosses** = “projects” slated for demolition

Source: ACLU
Services and race in US

- Kidney transplant
  - Blacks less likely to be offered option

- Pain management
  - Whites more likely than Black, Hispanic to be assessed and offered medication

- Mental health
  - “Non-whites” more likely to be considered psychotic, hospitalized involuntarily, placed in seclusion
Services and race in the US

• Child welfare
  – Black youth more likely to be sent to juvenile justice system versus mental health
  – Black children more likely to be reported as suspected victims of abuse

• Asthma
  – Blacks less likely to be prescribed preventive medication
Explanations for provider behavior?

• Overt prejudice and racism?
• Unconscious bias and stereotypes (social cognitions)?
• Cross-cultural misunderstanding and miscommunication?
• All of the above?
Methods of influence

• Health and human service providers can influence racial disparities in treatment

• See Figure 1 from van Ryn M. Paved with good intentions. Am J Public Health 2003;93:248-255
Poor cross-cultural/SES communication skills

- Failure to explain medical terms
- Failure to probe ambiguous words
- Failure to follow-up on patient cues
- Inability/unwillingness to probe for alternative explanatory models or other attitudinal or emotional issues
Assumptions of white monoculturalism

• Being white is morally neutral and the norm
  • Can’t put self in place of those from other cultures

• Value individualism and non-dependence

• Monolingual English

• Scientific empiricism trumps spirituality
Stereotypes and unspoken assumptions

• Disparities mirrored in analysis of hypothetical cases
  – Identical except for patient race
  – African-Americans more likely to be considered non-adherent to treatment
  – African-Americans seen as lacking social support for arduous treatments

• So altered gatekeeping and social interactions
Social cognitions/stereotypes

• Categorization and generalization as a cognitive “strategy” used for both social and non-social tasks
  • Brains always trying to do this
  • Learn a lot from watching influential others
• Like culture “overlearned” and thus “true”
  • Probably why it’s so easily manipulated
• Action based on this “learning” more likely to be employed or unquestioned in times of stress or threat
Social cognitions – “in-group”

- Seem to be innate brain mechanisms that learn to recognize others as “in” or “out” of your same “group”
  - Mechanism innate, who is in or out learned
- Recognition goes two ways – based on both what you perceive but what others signal verbally and non-verbally
Verbal and non-verbal communication

• “Non-verbal” channels include visual (face, body) and vocal (tone, inflection)
• Evidence that non-verbal channels are processed “automatically”
  – Outside awareness
  – Without intention
  – Separately from what is being overtly processed
So how might racial bias be transmitted and perpetuated?

- Find popular US network television programs (Bones, CSI, House, Scrubs, etc.)
- Find Black and White characters with enduring roles
- Rate those characters on their overall attractiveness, sociability, kindness, intelligence
  - Make sure they are equivalent across race
So how might racial bias be transmitted and perpetuated?

- Find scenes where index white character
  - Interacts with another white character from the list
  - Interacts with another black character from the list
- Prepare transcripts of the dialog
  - Ask raters to judge if speakers like each other and if speakers are treating each other positively (-3 to +3 scale)
  - Find no difference in pairs (white-white, white-black) for the dialog
http://ase.tufts.edu/psychology/ambady/materials/weisbuch_et_al.htm
Table 1: Study 1: Featured (but unseen) character ratings by race. Means ± SD; t(28).

<table>
<thead>
<tr>
<th>Character rating</th>
<th>White character mean</th>
<th>Black character mean</th>
<th>t value</th>
<th>P value</th>
<th>rpb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Favorable nonverbal response</td>
<td>0.16 ± 0.24</td>
<td>-0.04 ± 0.28</td>
<td>2.08</td>
<td>0.047*</td>
<td>0.37</td>
</tr>
<tr>
<td>Favorable verbal response</td>
<td>0.17 ± 0.20</td>
<td>0.04 ± 0.34</td>
<td>1.35</td>
<td>0.19</td>
<td>0.25</td>
</tr>
<tr>
<td>Perceived attractiveness</td>
<td>4.88 ± 1.16</td>
<td>4.74 ± 1.04</td>
<td>0.35</td>
<td>0.73</td>
<td>0.07</td>
</tr>
<tr>
<td>Perceived sociability</td>
<td>4.79 ± 0.66</td>
<td>5.14 ± 0.88</td>
<td>-1.22</td>
<td>0.23</td>
<td>0.22</td>
</tr>
<tr>
<td>Perceived kindness</td>
<td>4.54 ± 0.77</td>
<td>4.75 ± 0.48</td>
<td>-0.90</td>
<td>0.38</td>
<td>0.17</td>
</tr>
<tr>
<td>Perceived intelligence</td>
<td>4.92 ± 1.05</td>
<td>5.12 ± 0.93</td>
<td>-0.56</td>
<td>0.58</td>
<td>0.10</td>
</tr>
</tbody>
</table>

Why not do away with race altogether?

• California Proposition 54 (2003)
  – Would have banned collection of information on race, ethnicity, color, or national origin in public education, employment, or contracting
Motivations to develop a racial identity (racial socialization)

• Point around which to build a community
  – Pride, sense of collective duty, mechanism for preserving cultural attributes
• Means of excluding those who seek to “crash” and obtain scarce resources
• Means of advocating for access to services
• Preparation for bias
• Source of political power
American Indian tribes

- In US law varies by program/issue
  - Eligibility for social programs
  - Jurisdiction in criminal matters
  - Preferences in government hiring
  - Administration of tribal property

- Can be divisive among Indians
  - Not all tribes “recognized” by government
    (ie, seen as having political/economic relationship with federal government)

- Eligibility depends on blood quota
What would a color-blind society look like?

• To deny difference is to deny the imbalance of power
  • Need labels to measure and enforce laws
  • Fear that “color-blind” would really mean “white culture”

So why do we use “race” as a variable in public health?

• Possibly appropriate
  – Experience or practice of discrimination is a relevant variable
  – Studies of populations that self-identify in this way
  – Studies linked to policies/laws that use this label
  – Studies of the legitimacy of using the label
Why use “race” as a variable?

• Probably not appropriate
  – Conscious or unconscious proxy for income, SES, place of residency
  – Studies that assume race has inherent biologic associations to broad characteristics like behavior or intelligence
Why use “race” as a variable?

• ??
  – Studies targeting populations with apparent differences in gene prevalence
    • Tay-Sachs (Eastern European Jews)
    • Sickle cell disease (African-Americans)
    • Cystic Fibrosis (Caucasians)
    • Liver enzyme polymorphisms (various)
  – Associations likely to change with geographic mobility
¿Conclusions?

- “Race Matters” (Cornell West)
- A pseudo-scientific term has taken on political, social, cultural meaning
- We probably use racial labels too casually
- Racial attitudes, like cultural beliefs, are probably “overlearned” and therefore likely to be unconsciously or unquestioningly used as a basis of action