Implications for Health Disparities Research

Keith E. Whitfield, Ph.D.
President and Professor of Psychology
University of Nevada Las Vegas

RCCN Workshop on Biological Aging
Race differences in Life Expectancy

Life Expectancy at Birth 2020

Hispanic: 79.9
Non-His Whites: 78.0
Non-His Blacks: 72.0

Vital Statistics Rapid Release, #010 (Feb. 2021)
Health Disparities

• Compared to Caucasians, African Americans experience higher rates of:
  • Hypertension
  • Diabetes
  • Obesity
  • Fatal stroke
  • Heart disease death
  • End-stage kidney disease

• Differences in Walking speed-African Americans slower
Are social and behavioral factors important?

• To understand biological aging, needs to have phenomena contextualized

• Need social, psychological factors that vary by race to understand how they work, are changed, and could be improved relative to biological markers of aging

• Time, time, time!
  • More time points is important
  • What changes over time?
  • Is there an accumulation of detrimental factors?
  • Is there resilience regardless of environmental factors?
Do the causes of health disparities create differences in biological aging

- African-Americans experience many more adverse health conditions earlier in life
  - the more vulnerable members of cohorts die at higher rates
  - The survivors represent “exceptional agers” in (very) late life

- Do social factors create accelerated biological aging?
  - Weathering hypothesis

- How do we typically understand minority populations?
  - Comparing the minority group to majority
  - Within group variability might be unique-missunderstood
Accelerated Aging

Predicted rate of biological age acceleration by risk of depression: CARDIA, 1995-2015

Accumulation effect social factors on biological aging - Weathering
Why study African Americans Biological Aging?

• Fewer African Americans at very late ages
  • Start off as smaller denominator

• But if live long enough have greater probability of survival after 85

• African American Centenarians least likely to be alive
  • So how did they do it?

• Are there factors for successful aging that are resistant to environmental pressures?

• Are epigenetic clocks the same across groups?-Higgins-Chen
Take aways

• Biologic aging needs to be contextualized

• Diversity of samples will make for better science

• Better representation of human condition

• Creation of equality in advances for improving health
Thank You!

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