

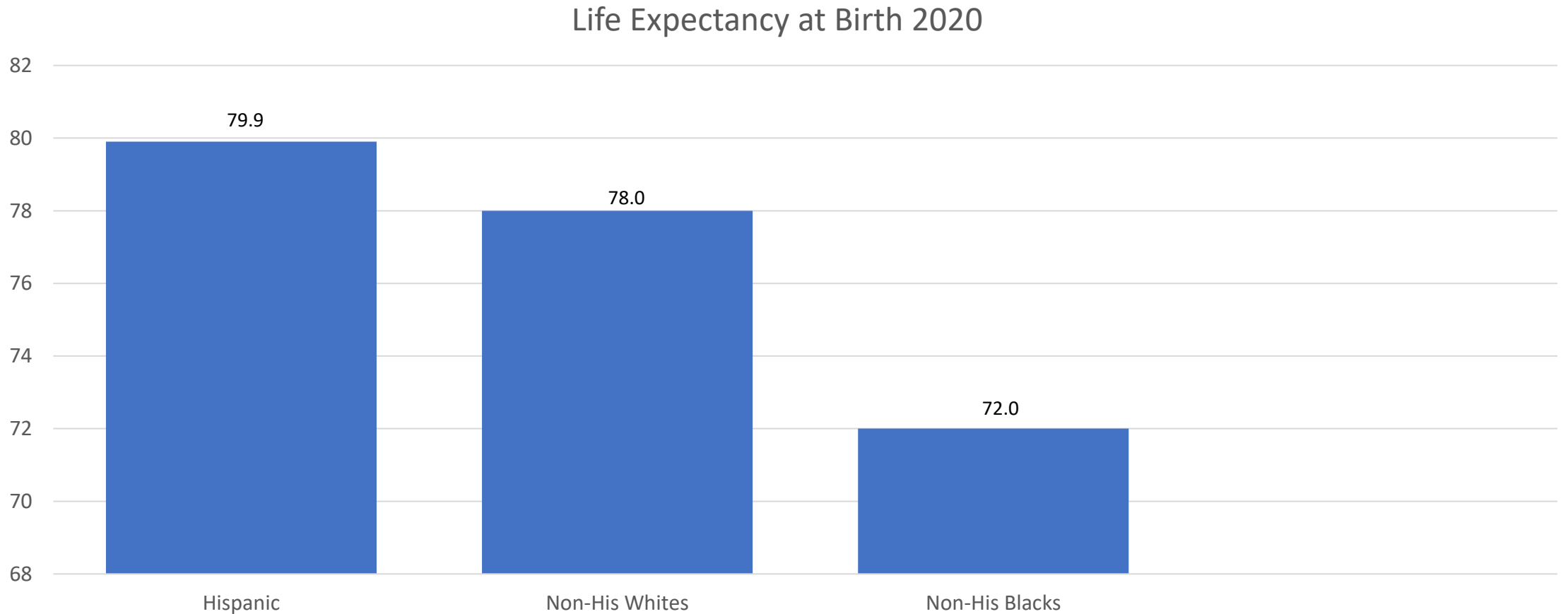
# Implications for Health Disparities Research

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RCCN Workshop on Biological Aging



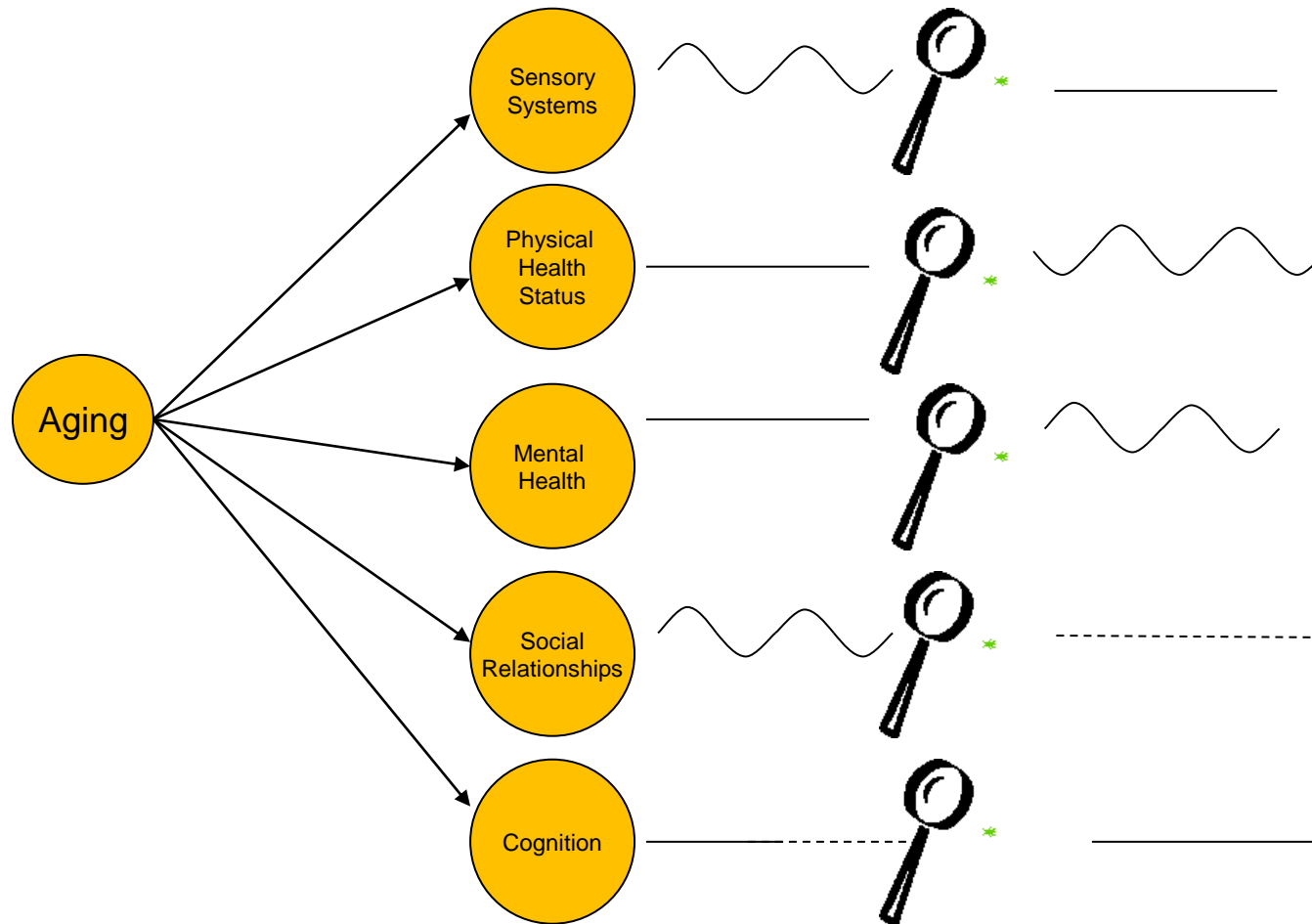
# Race differences in Life Expectancy



# 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

# Cultural Lens



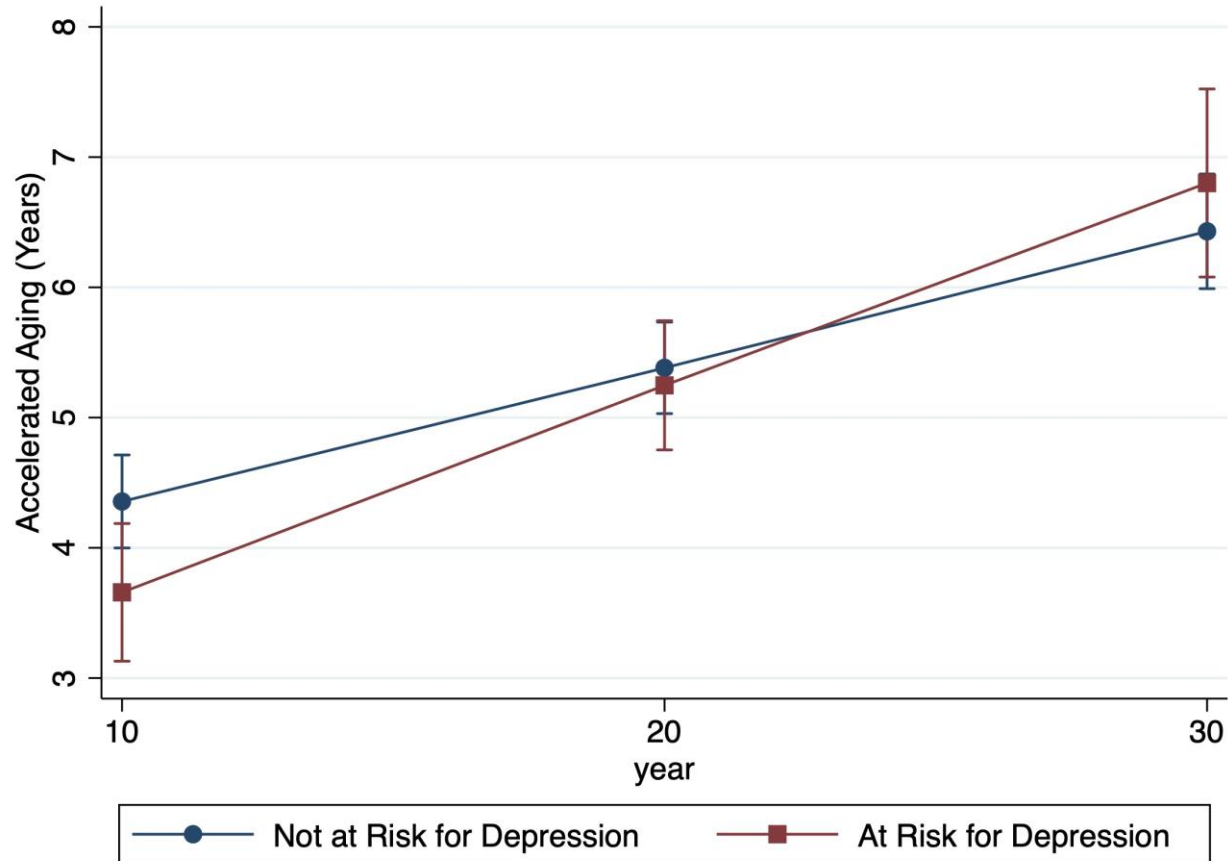
# Are social and behavioral factors important?

- 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

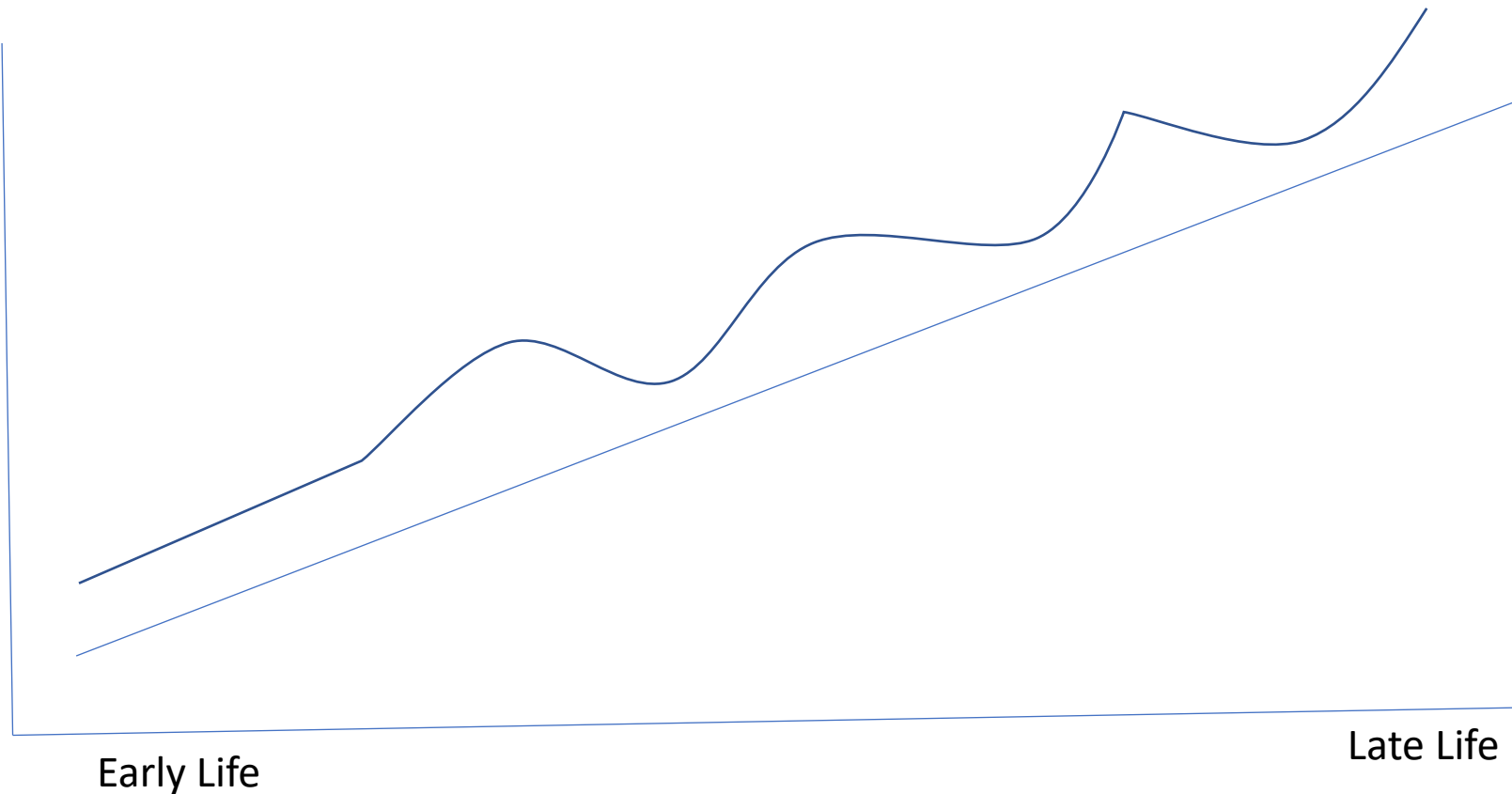
# Accelerated Aging



Forrester, S.N., Whitfield, K.E., Kiefe, C.I., Thorpe, Jr., (2021). Navigating Black Aging: The biological consequences of Stress and Depression. *The Journal of Gerontology Series B*, <https://doi.org/10.1093/geronb/gbab224>.

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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