

The Contribution of Population-Level Health Inequalities to Prepregnancy BMI and Gestational Weight Gain in the United States

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Presenter Disclosures

The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

No relationships to disclose

The importance of a life course perspective...

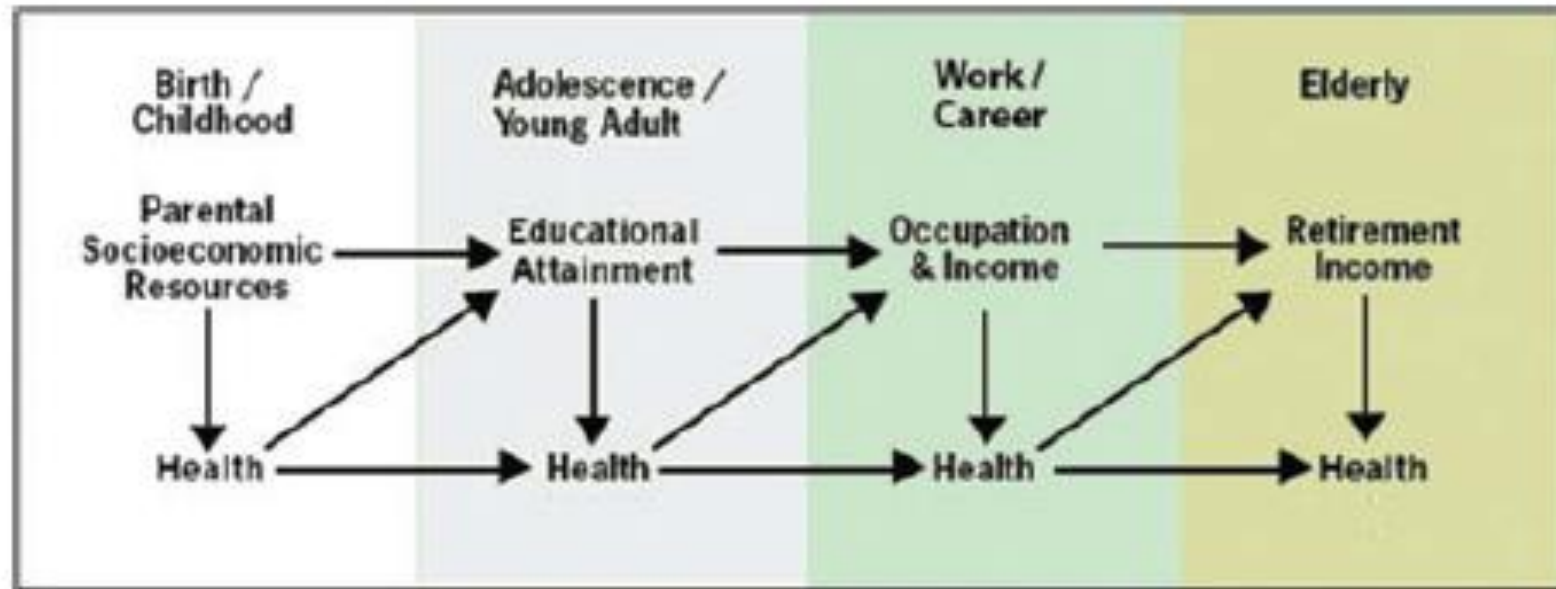
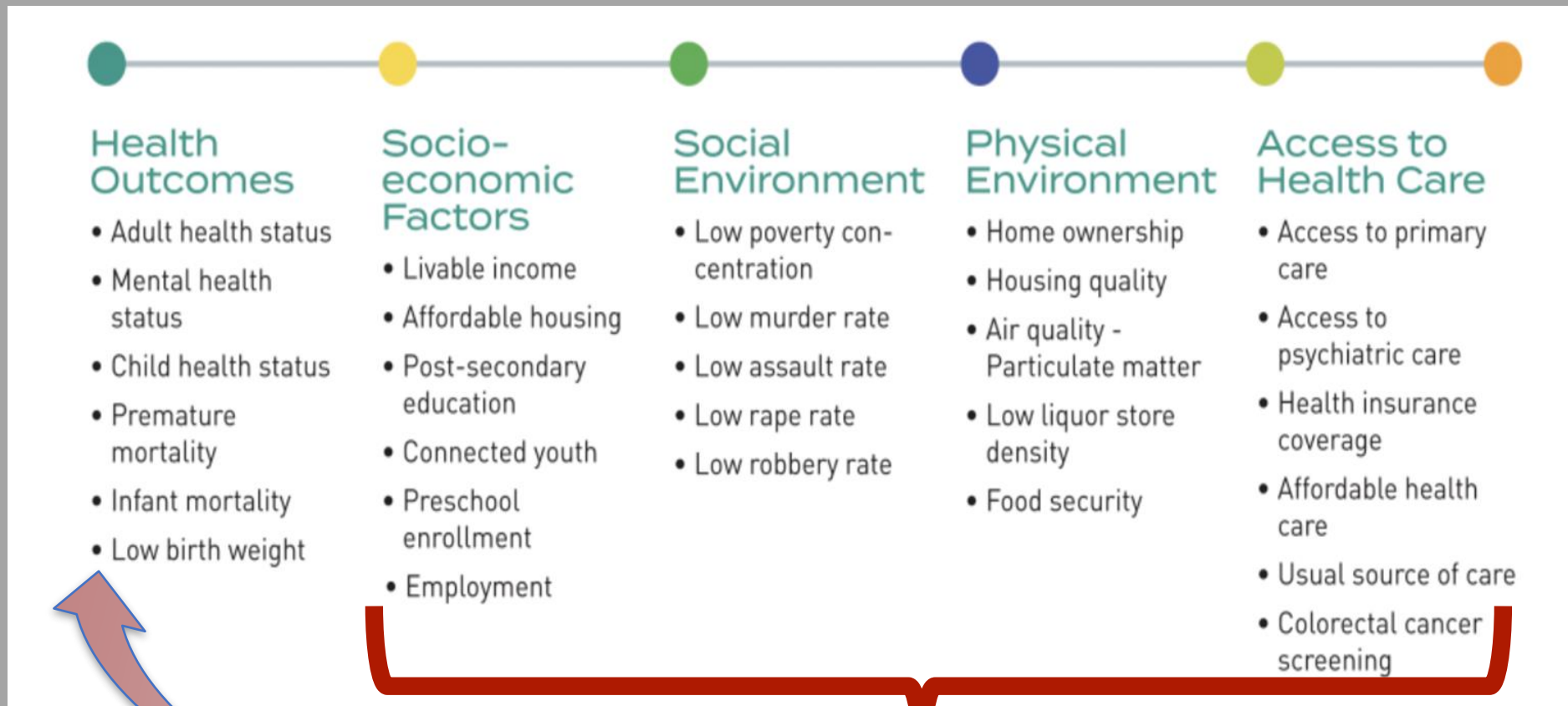


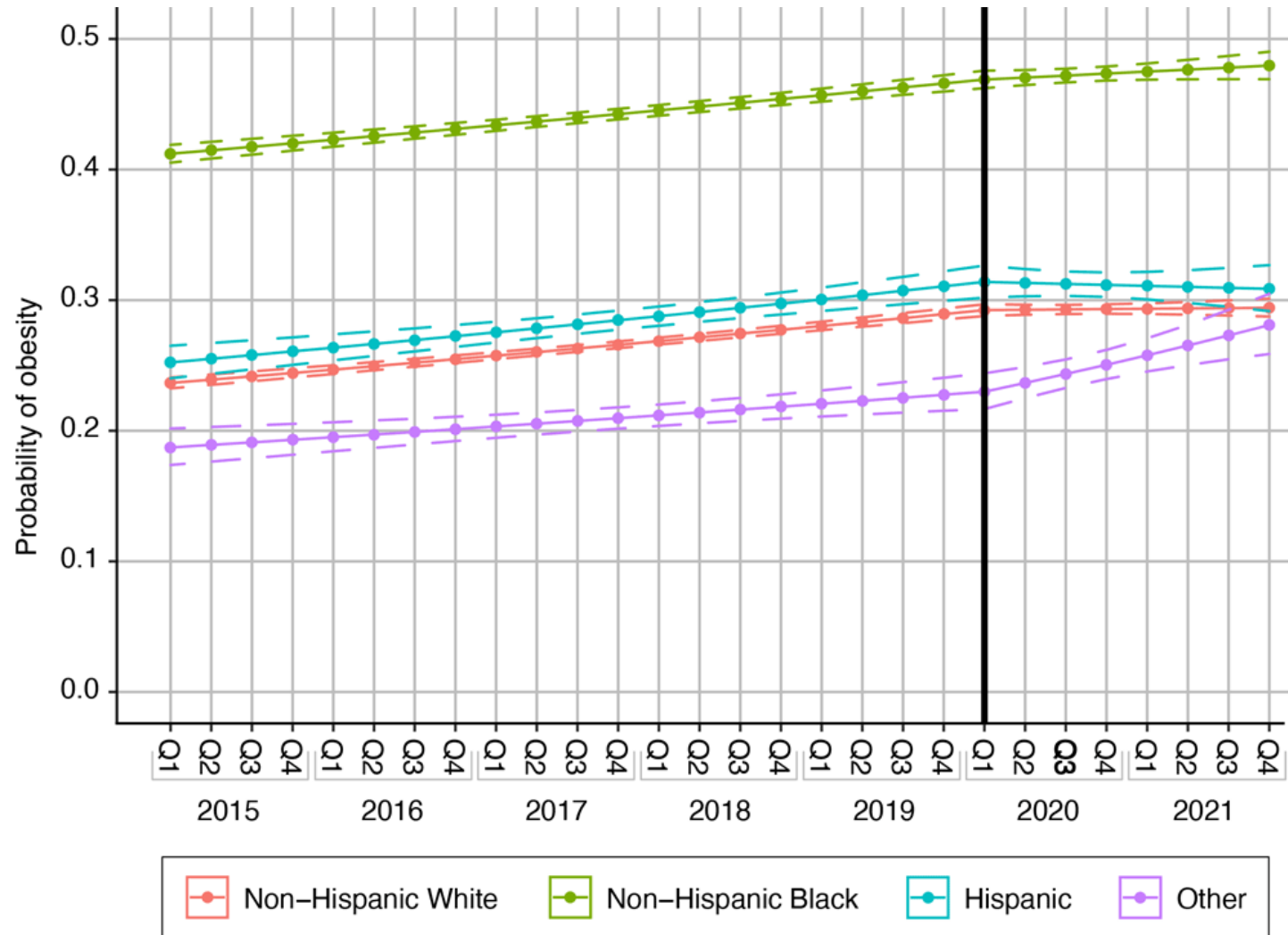
Figure 1. The dynamic and reciprocal relationships between SES and health through the life-course. (Source: Adler, N.E., Stewart, J., and members of the MacArthur Network on SES and Health. 2008. *Reaching for a Healthier Life. Facts on Socioeconomic Status and Health in the U.S.* University of California, San Francisco. Accessed at: <http://www.macses.ucsf.edu/News/Reaching%20for%20a%20Healthier%20Life.pdf>)

Structural Drivers of Health Outcomes



<http://www.nationalcollaborative.org/>

Demographic disparities in prepregnancy BMI



Simpson SE, et al. Trends in Gestational Weight Gain and Prepregnancy Obesity in South Carolina, 2015–2021. *Prev Chronic Dis* 2024;21:240137. <http://dx.doi.org/10.5888/pcd21.240137>

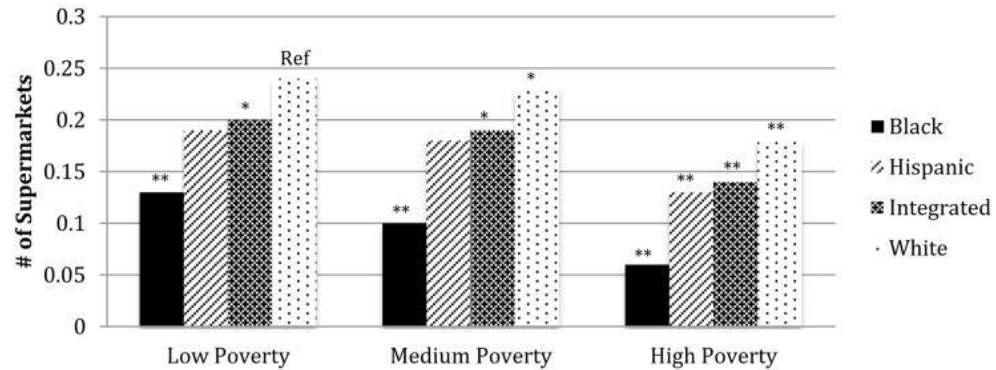
Environmental and Structural Contributors

- Likely that disparities in GWG reflect systemic inequities across race, SES, and geography.
 - Food apartheid/insecurity/deserts
 - Built environment (e.g., access to parks, sidewalks, prenatal care)

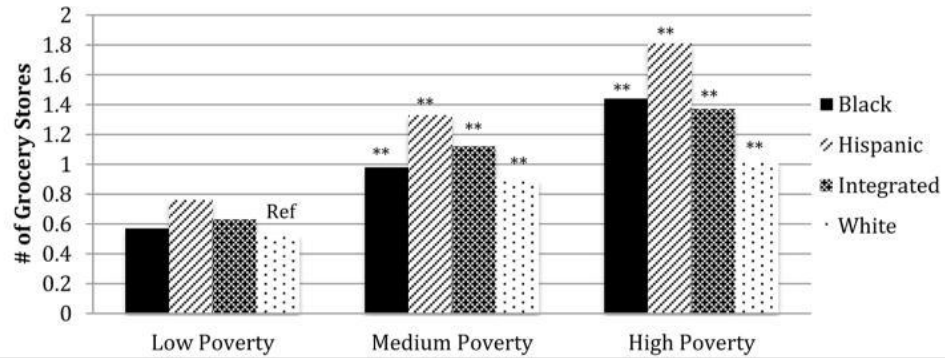


Food Apartheid/ Desert/ Insecurity

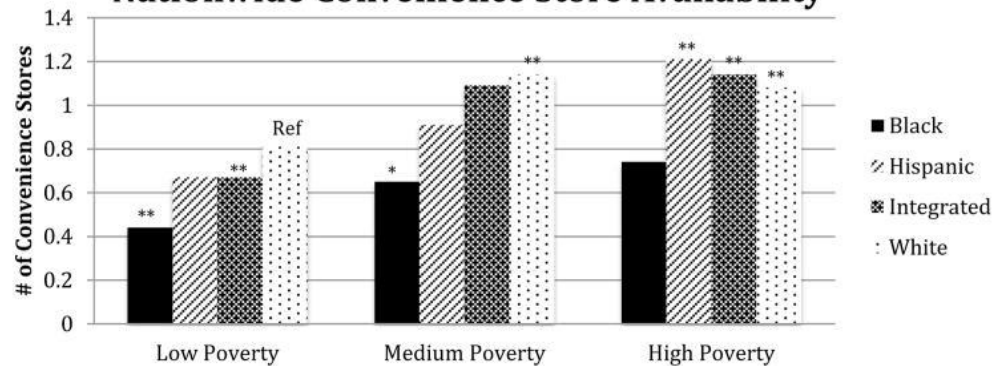
Nationwide Supermarket Availability



Nationwide Grocery Store Availability



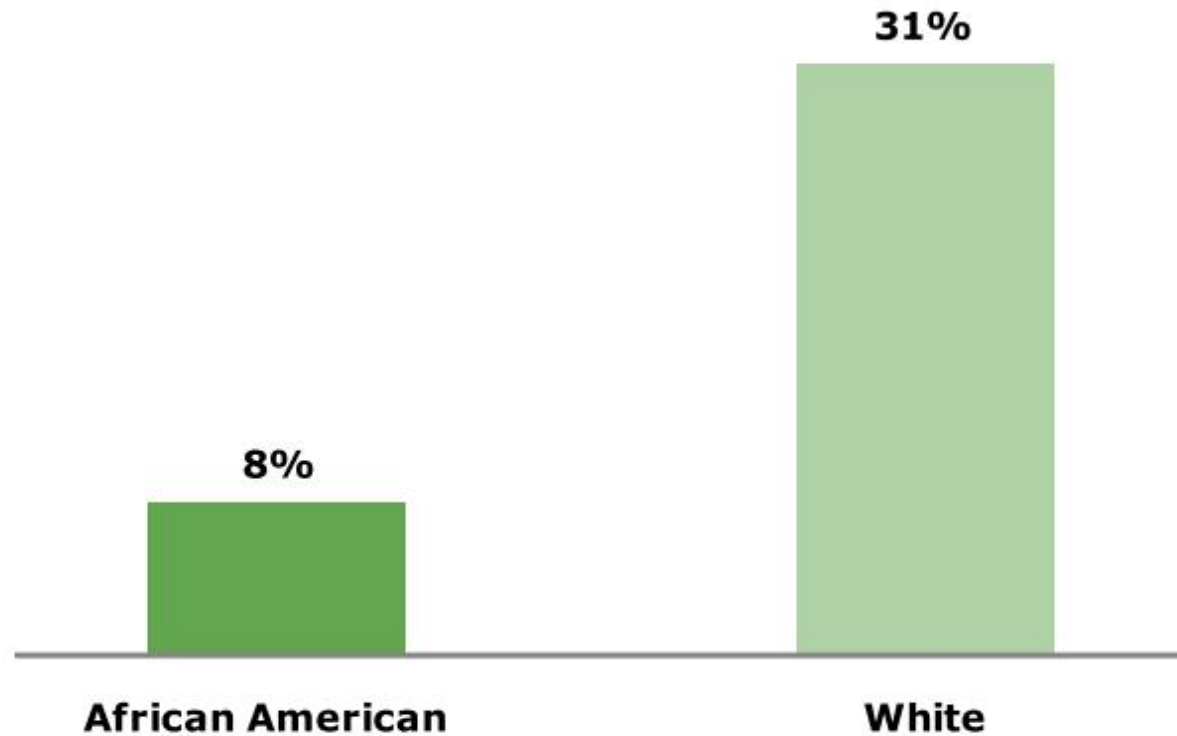
Nationwide Convenience Store Availability



Bower et al, Prev Med.
2013 Oct 23;58:33–39.

Food Apartheid/Desert/Insecurity

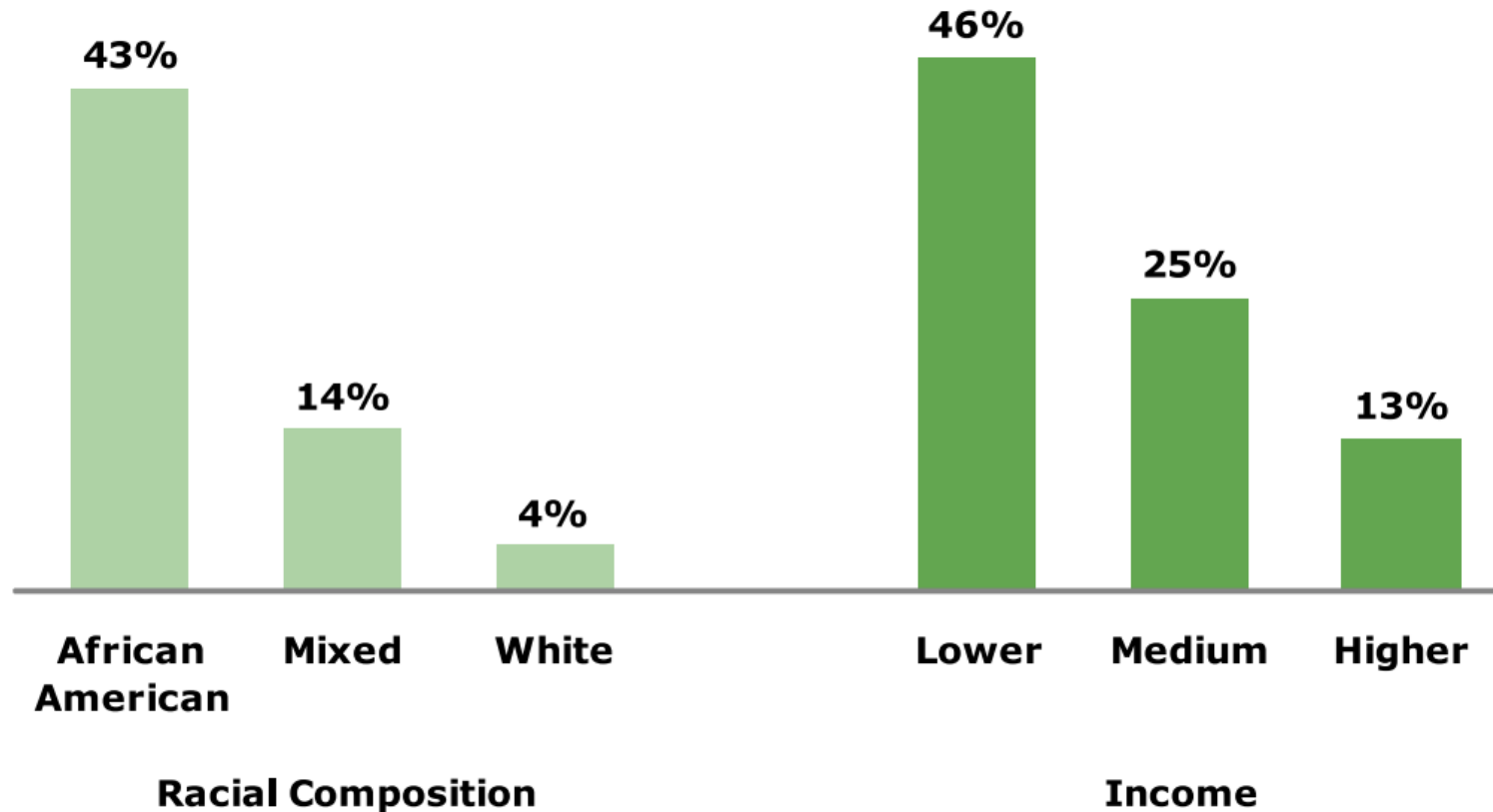
Have a supermarket in census tract of residence



Source: Morland et al., 2002.

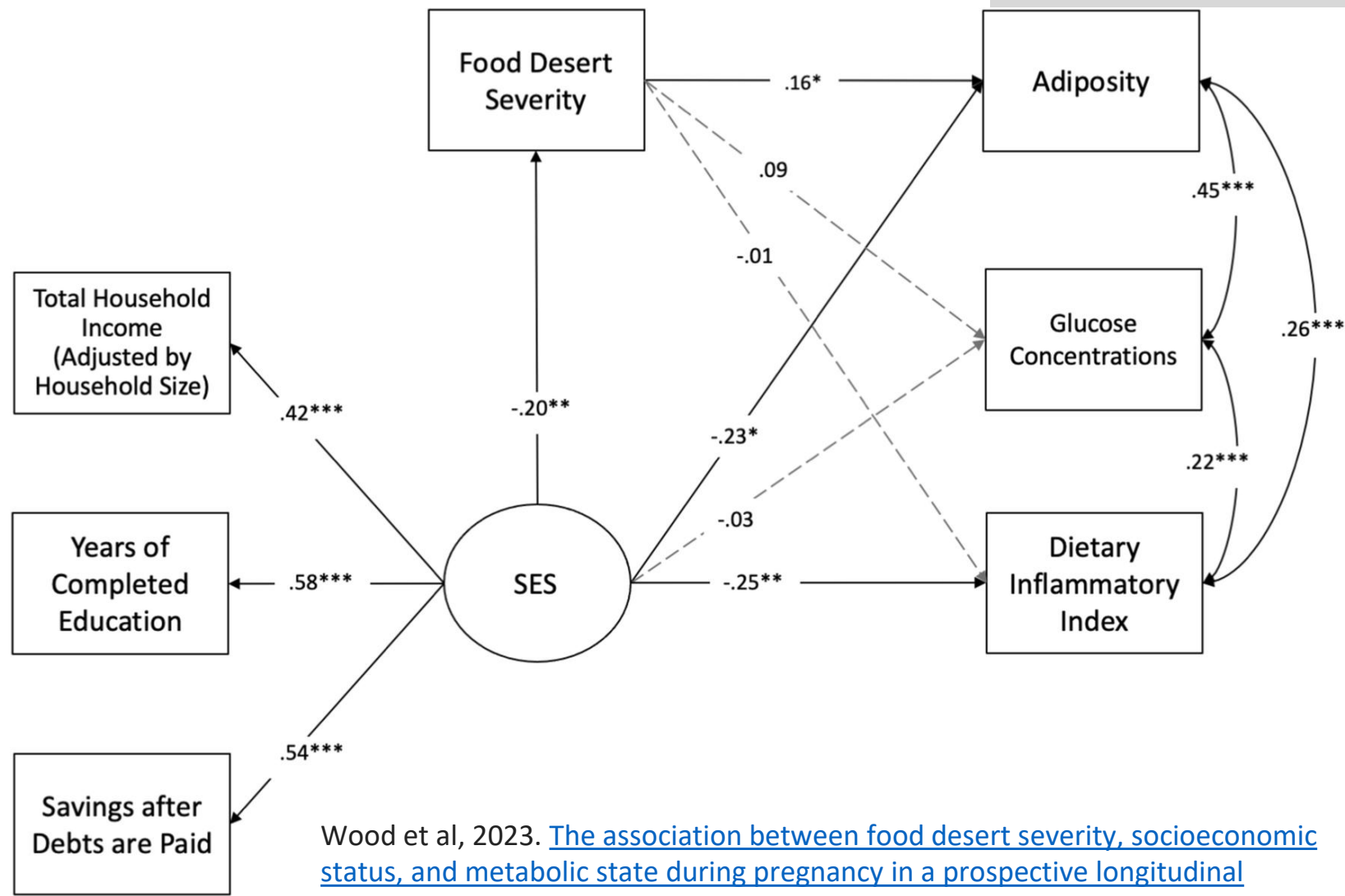
Food Access by Race and Income

Share of Baltimore Neighborhood Food Stores with Low Availability of Healthy Food, by Neighborhood Race and Income, 2006

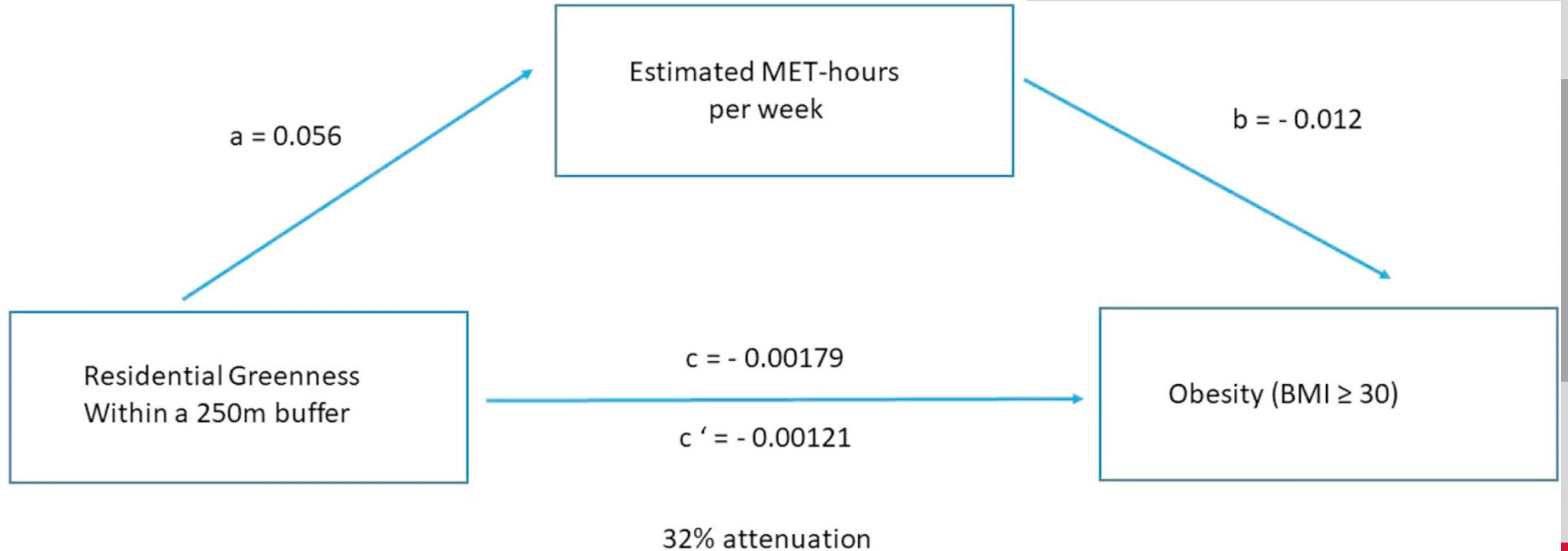


Source: Franco et al., 2008.
grocerygap.original.pdf

Risk associated with food insecurity



Built Environment and Physical Activity and Obesity

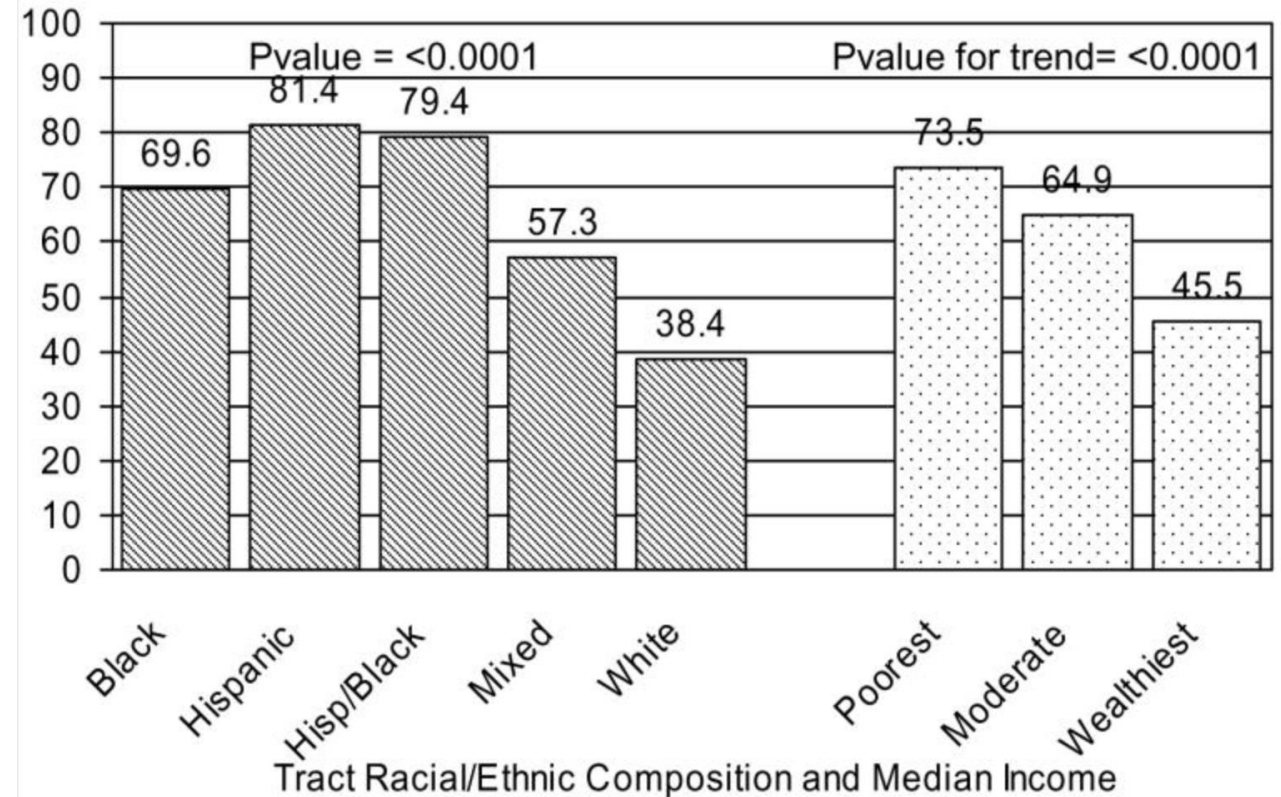


Villeneuve et al, 2018

Built Environment

- Access to park spaces
- Access to sidewalks

Figure 1b: Percent of tracts from all sites without a recreational facility by racial/ethnic composition and median income adjusted for tract area*



* Proportions were adjusted to the mean area of the tracts using logistic regression

Moore et al., Am J Prev Med. 2008 Jan;34(1):16–22.
doi: [10.1016/j.amepre.2007.09.021](https://doi.org/10.1016/j.amepre.2007.09.021)

Policy and Public Health Interventions

- Examples of programs (e.g., WIC, Medicaid expansion, community health initiatives)
- Opportunities to address disparities through primordial prevention

Challenges and Barrier

- Policy resistance
- Underfunding of maternal health programs
- Difficulty addressing upstream causes (e.g., poverty, racism)

Future Directions and Research Needs

- Longitudinal studies
- Intersectionality-informed research
- Data gaps (e.g., in LGBTQ+ populations, rural areas)

Conclusions & Call to Action

- Health inequalities significantly impact prepregnancy BMI and GWG
- Disparities are deeply rooted in structural and social determinants
- Need for systemic, multisectoral solutions
- **Call to Action**
 - For researchers: Further studies on structural factors
 - For policymakers: Invest in upstream interventions

Thank you