



Measuring of Structural Racism for Health Policy

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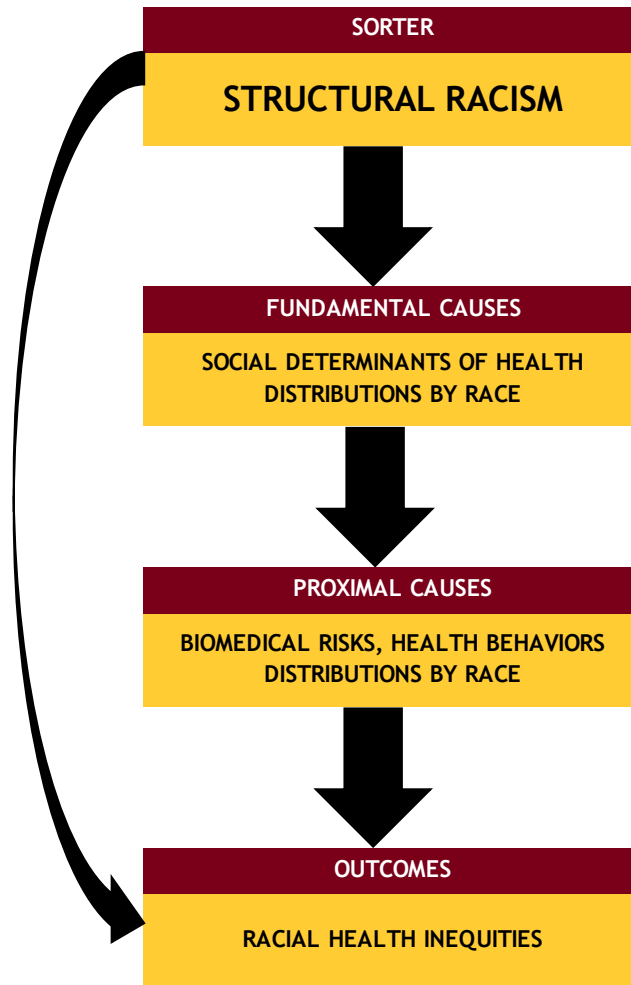
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Roundtable on Obesity Solutions at NASEM



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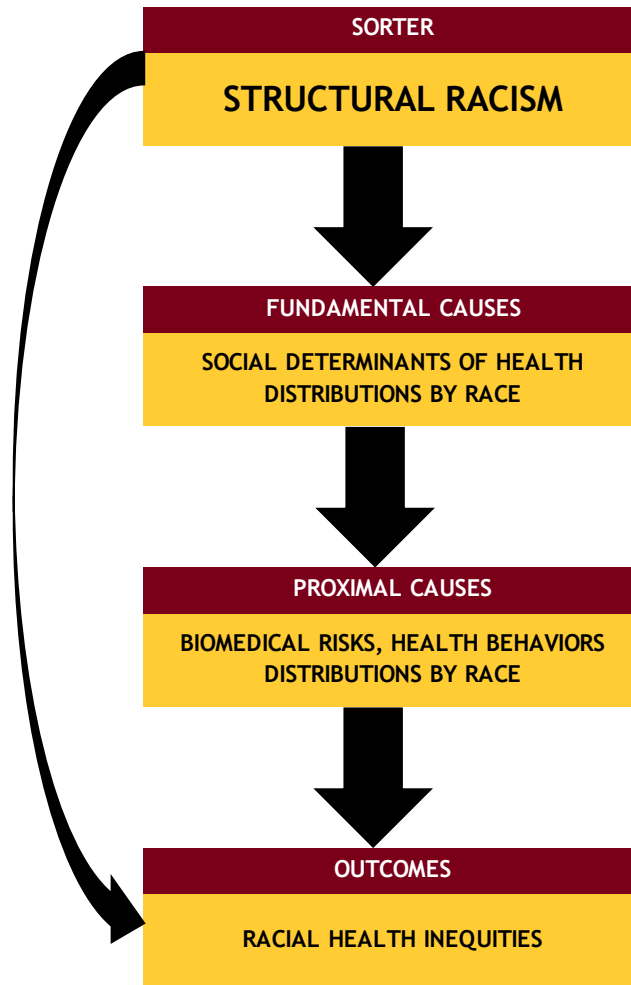
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Structural racism is

“the totality of ways in which societies foster racial discrimination, through mutually reinforcing inequitable systems (in housing, education, employment, earnings, benefits, credit, media, health care, criminal justice, and so on) that in turn reinforce discriminatory beliefs, values, and the distribution of resources, which together affect the risk of adverse health outcomes.”

Source: Bailey ZD et al. Structural racism and health inequities in the USA: Evidence and interventions. *The Lancet*. 2017. 389 (10077). 1453-1563.



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By Rachel R. Hardeman, Patricia A. Homan, Tongtan Chantararat, Brigitte A. Davis, and Tyson H. Brown

OVERVIEW

Improving The Measurement Of Structural Racism To Achieve Antiracist Health Policy

ABSTRACT Antiracist health policy research requires methodological innovation that creates equity-centered and antiracist solutions to health inequities by centering the complexities and insidiousness of structural racism. The development of effective health policy and health equity interventions requires sound empirical characterization of the nature of structural racism and its impact on public health. However, there is a disconnect between the conceptualization and measurement of structural racism in the public health literature. Given that structural racism is a system of interconnected institutions that operates with a set of racialized rules that maintain White supremacy, how can anyone accurately measure its insidiousness? This article highlights methodological approaches that will move the field forward in its ability to validly measure structural racism for the purposes of achieving health equity. We identify three key areas that require scholarly attention to advance antiracist health policy research: historical context, geographical context, and theory-based novel quantitative and qualitative methods that capture the multifaceted and systemic properties of structural racism as well as other systems of oppression.

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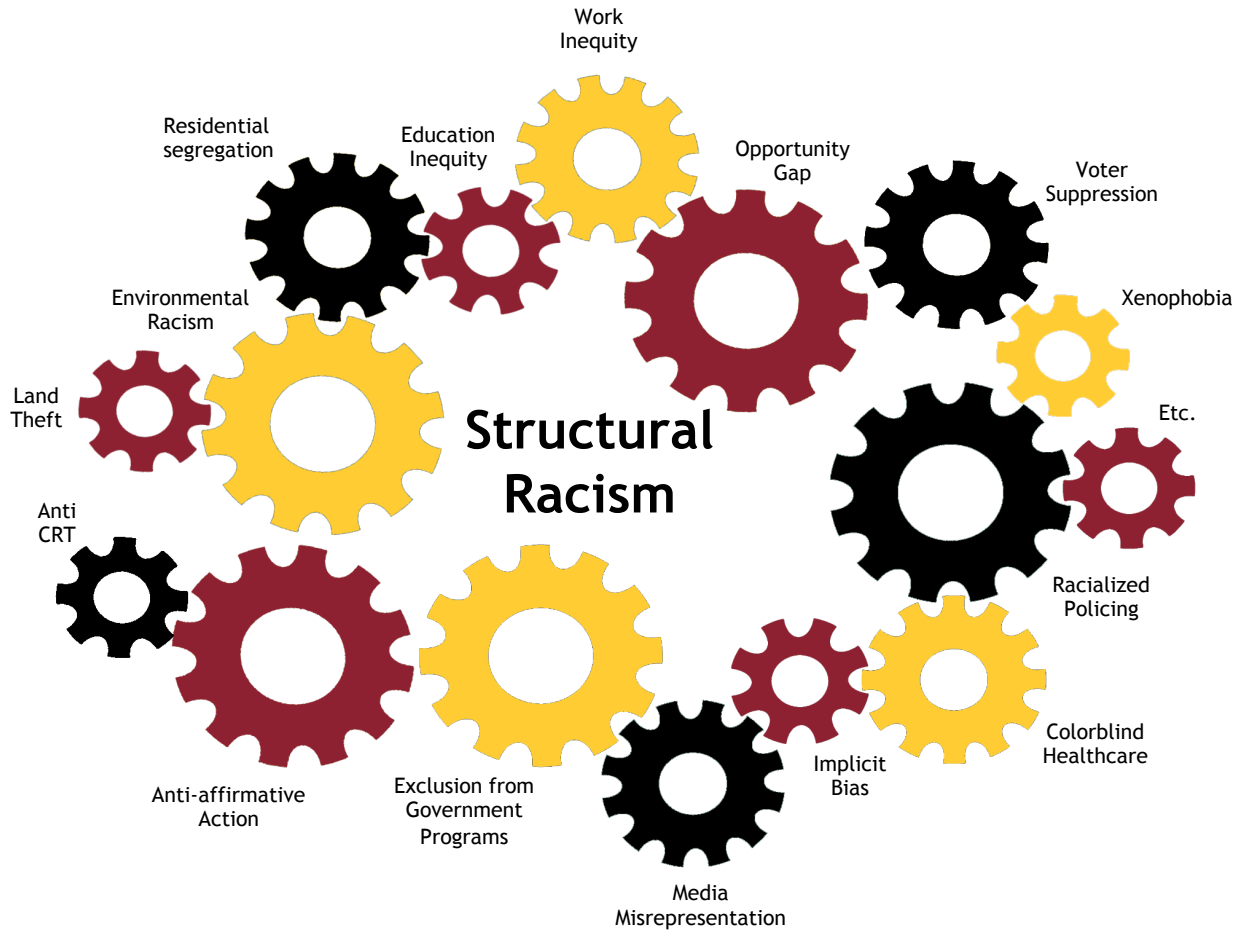
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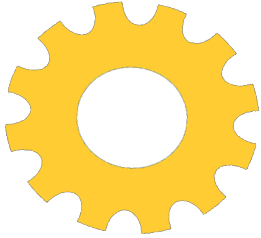
“We cannot
change what we
cannot measure.”





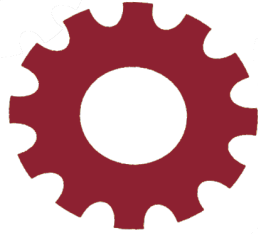
The whole is greater than the sum of its parts

**Residential
Segregation**

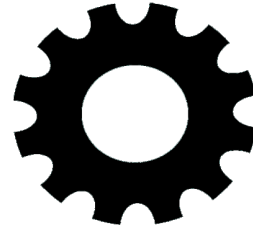


**Health
Inequities**

**Work
Inequity**



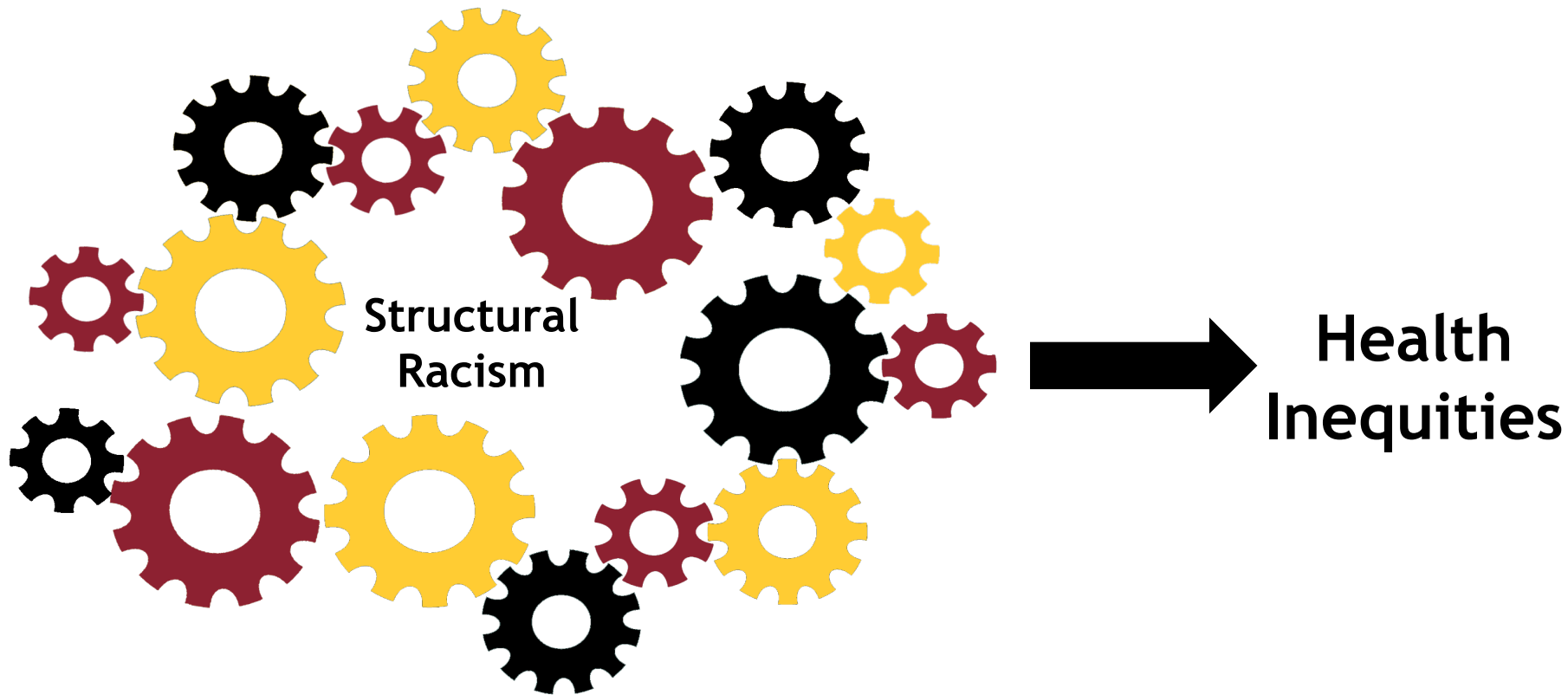
**Health
Inequities**



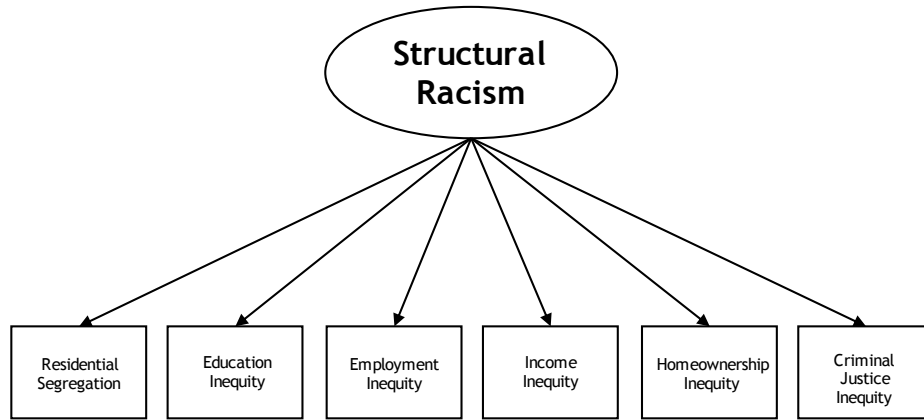
**Racialized
Policing**



**Health
Inequities**



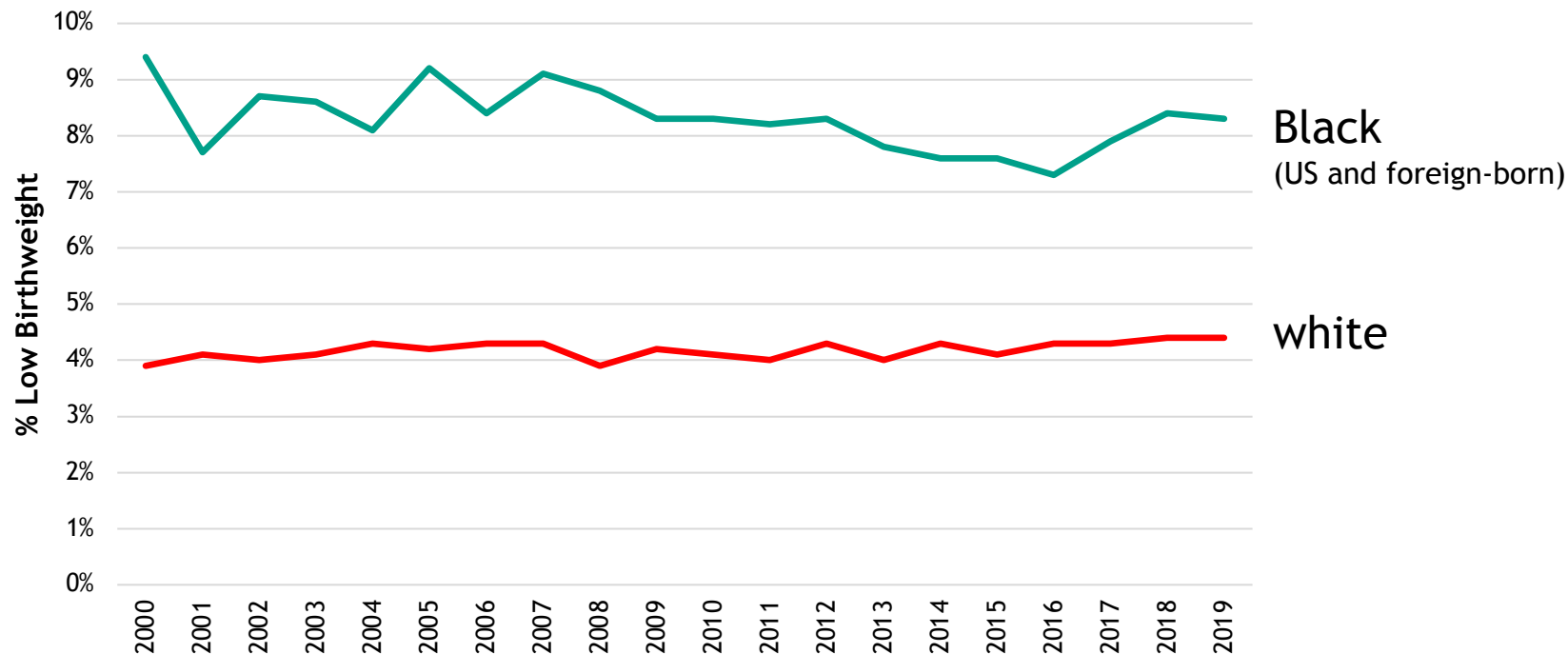
Structural Racism = Latent Construct



- Latent measures assume the shared variance between dimensions represents the construct of structural racism
- **Latent class analysis (LCA)** identifies qualitative multidimensional typologies
- Common application of LCA: personality types

Birth Inequities in Minnesota

Chantarat T, Van Riper DC, Hardeman RR. Multidimensional structural racism predicts birth outcomes for Black and White Minnesotans. *Health Services Research*. Forthcoming.



Source: Minnesota Department of Health, Minnesota Center for Health Statistics. <http://www.health.state.mn.us/divs/chs/>

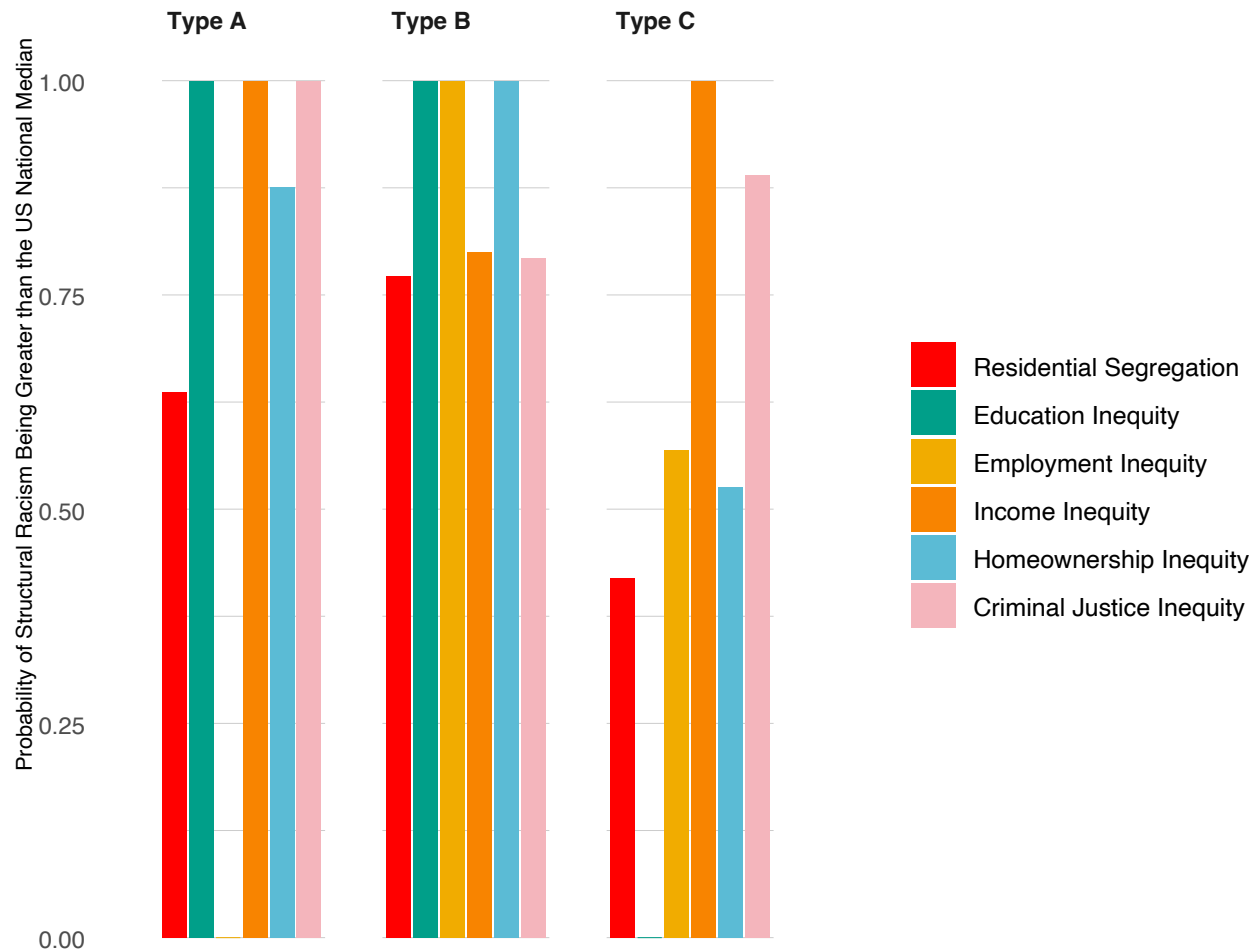
Research Questions

1. Do the risks of preterm birth (PTB), low birthweight (LBW), and small-for-gestational-age birth (SGA) for white, U.S.-born Black, and foreign-born Black people exposed to the same structural racism typology (i.e., residence in an area with the same pattern of structural racism) differ?
2. Do the risks of PTB, LBW, and SGA differ for people of the same racial background in different structural racism typologies?

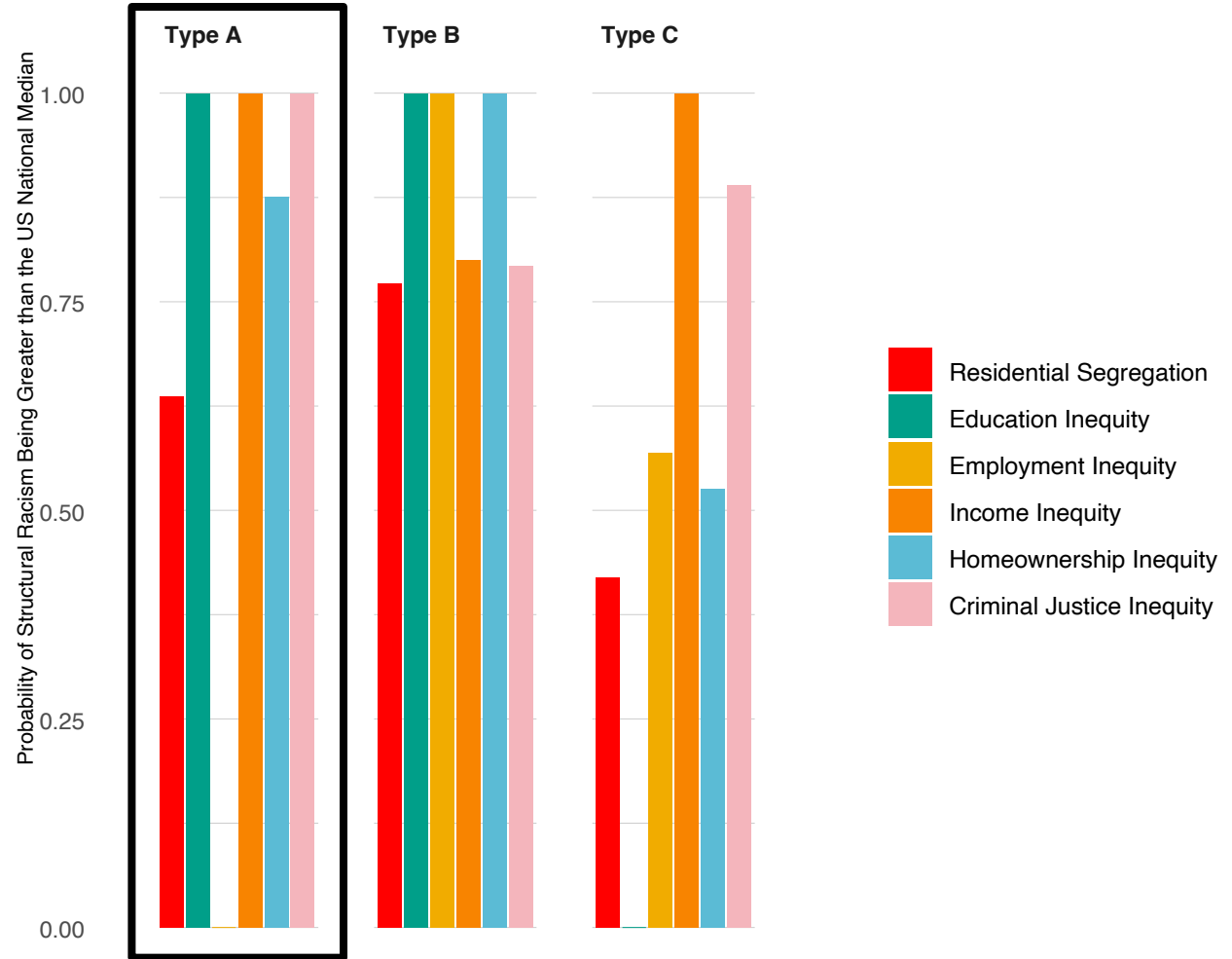
Analysis

- Birth records of singletons of white (n=20,875), US-born Black (n=2,782), and foreign-born Black (n=4,648) pregnant people giving birth in 2018
 - Merged with unidimensional structural racism measures
- Vermunt's 3-step approach
 1. Latent class model fitting
 2. Modal assignment of pregnant people to structural racism typologies
 3. Relating structural racism typologies to PTB, LBW, and SGA

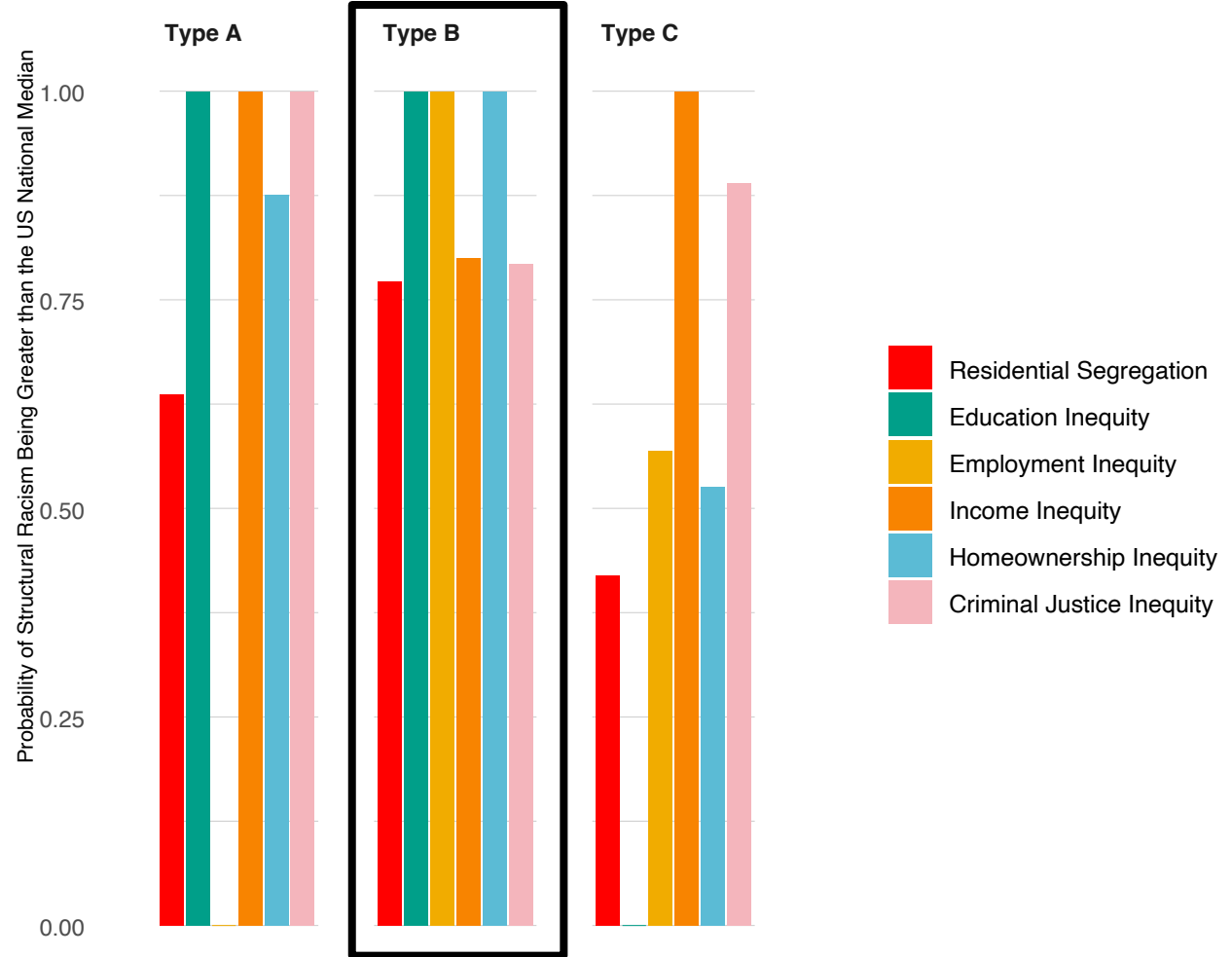
Structural Racism Typologies



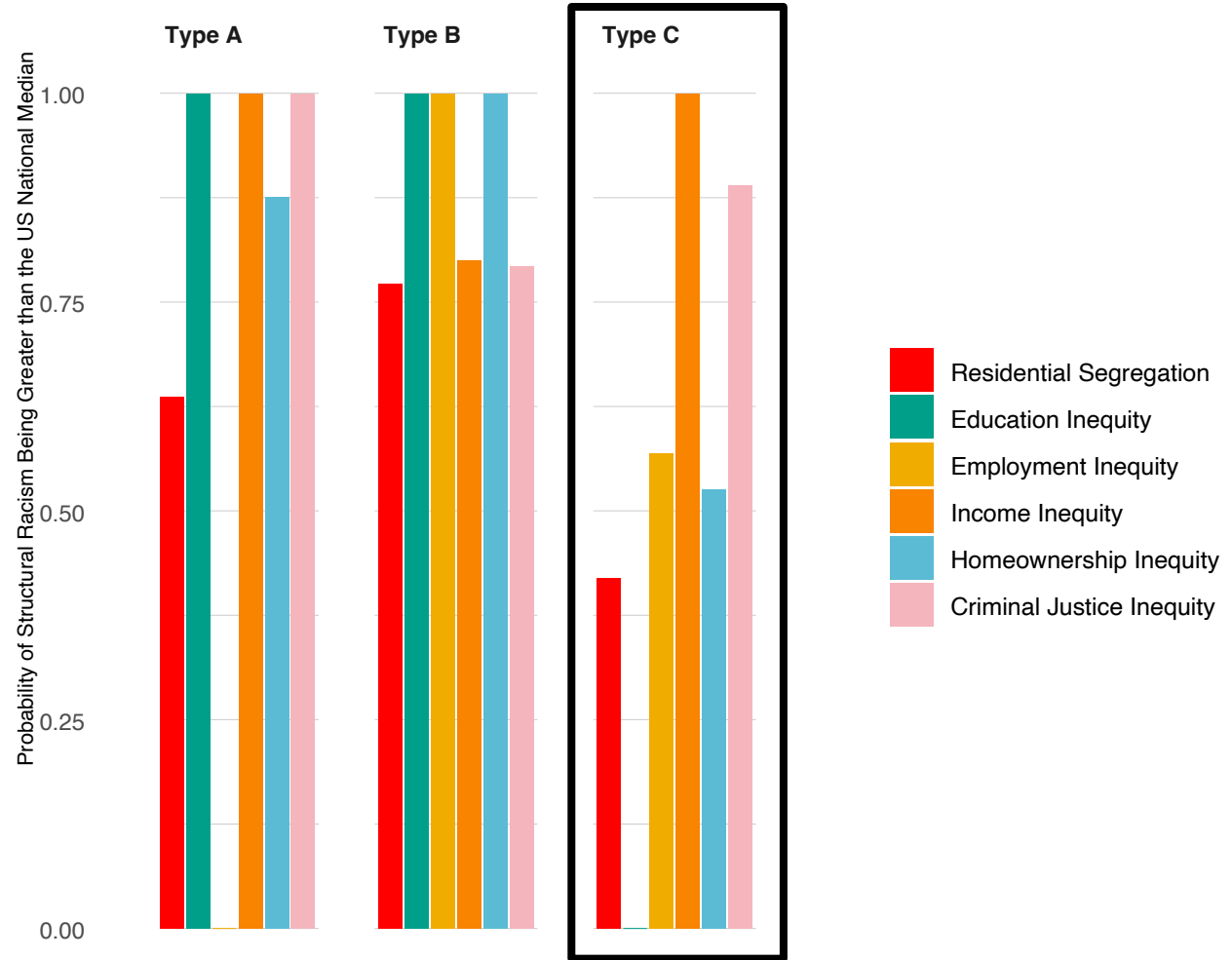
Structural Racism Typologies



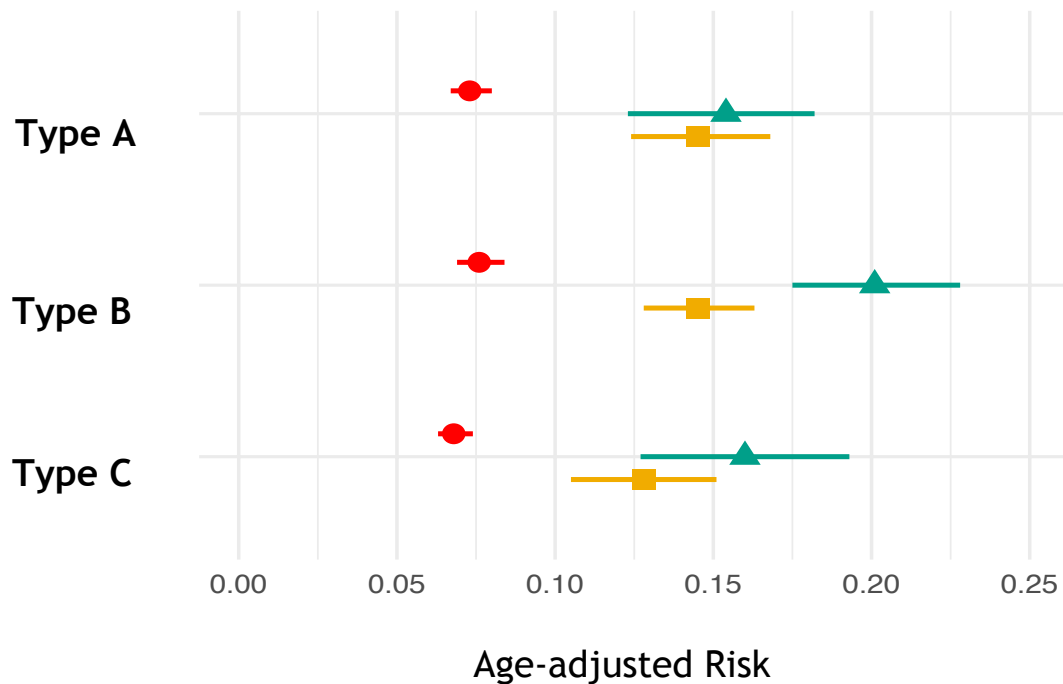
Structural Racism Typologies



Structural Racism Typologies



Small for Gestational Age

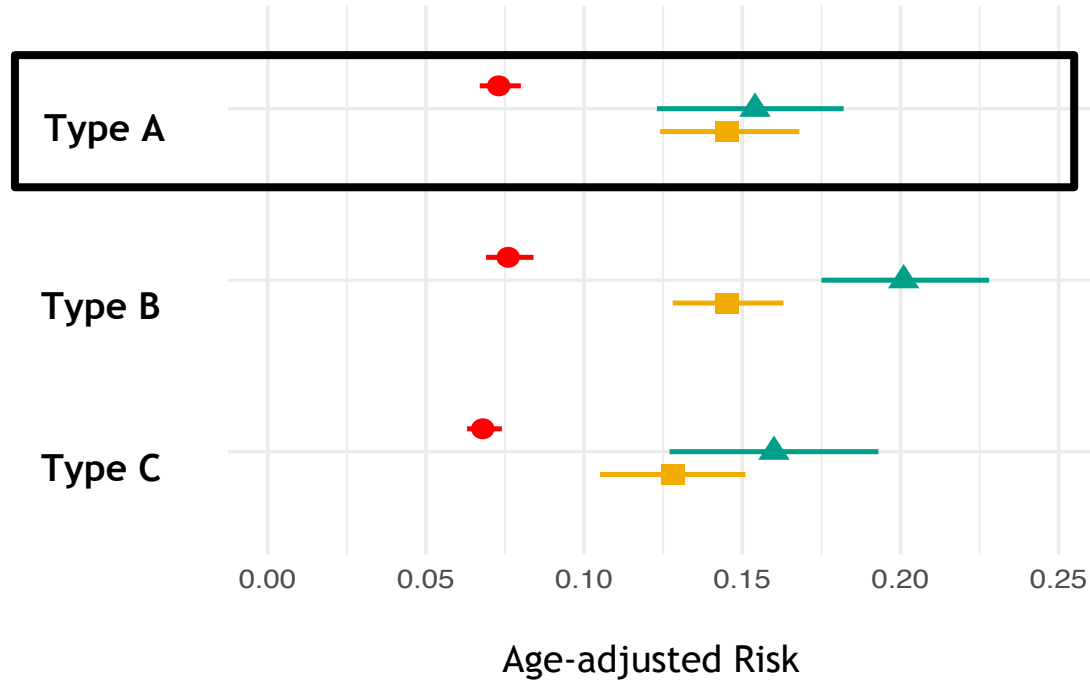


● white

▲ US-born Black

■ Foreign-born Black

Small for Gestational Age

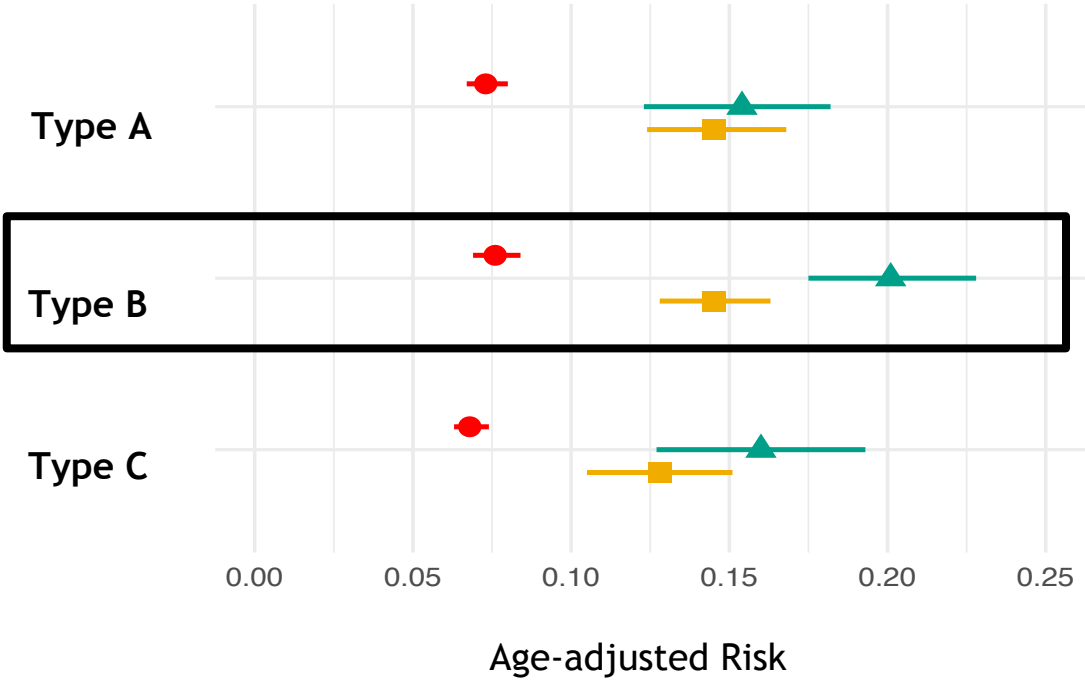


● white

▲ US-born Black

■ Foreign-born Black

Small for Gestational Age

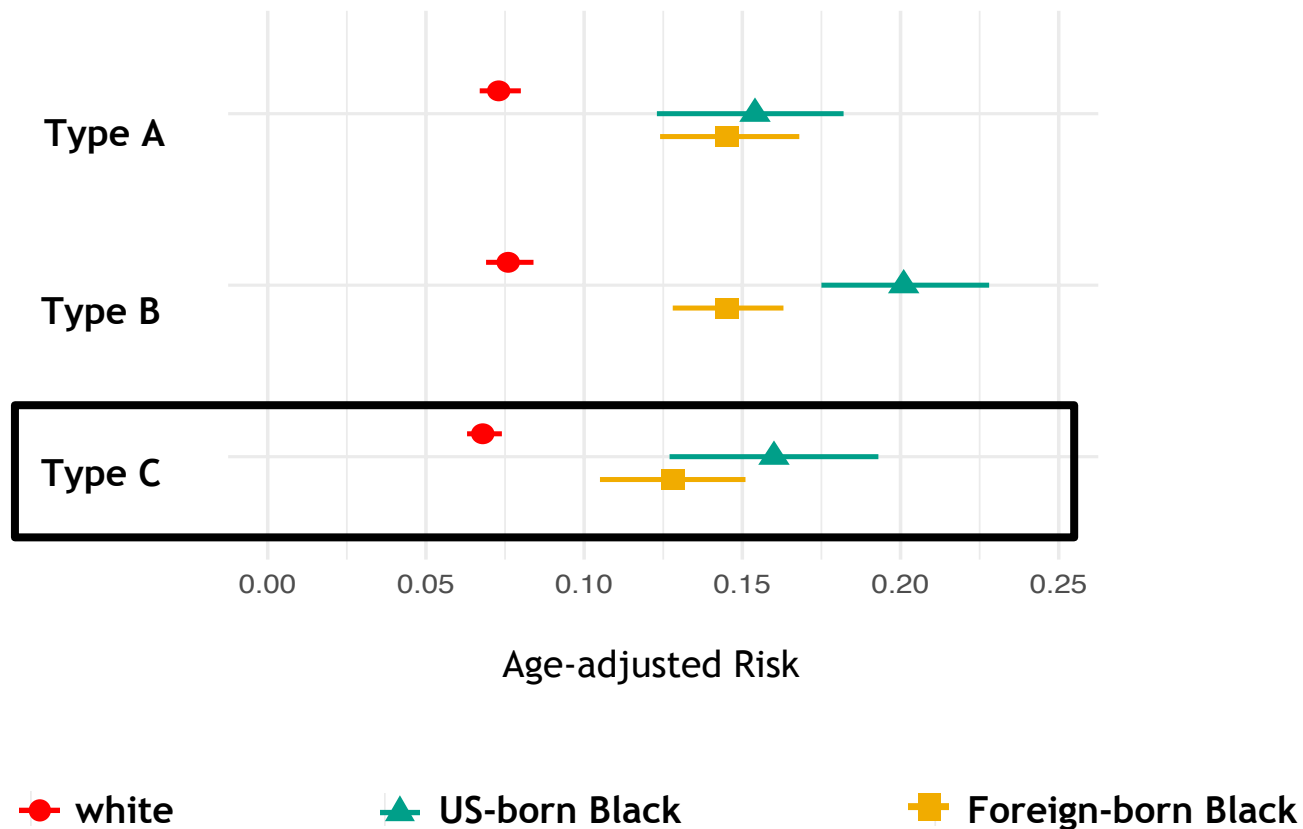


● white

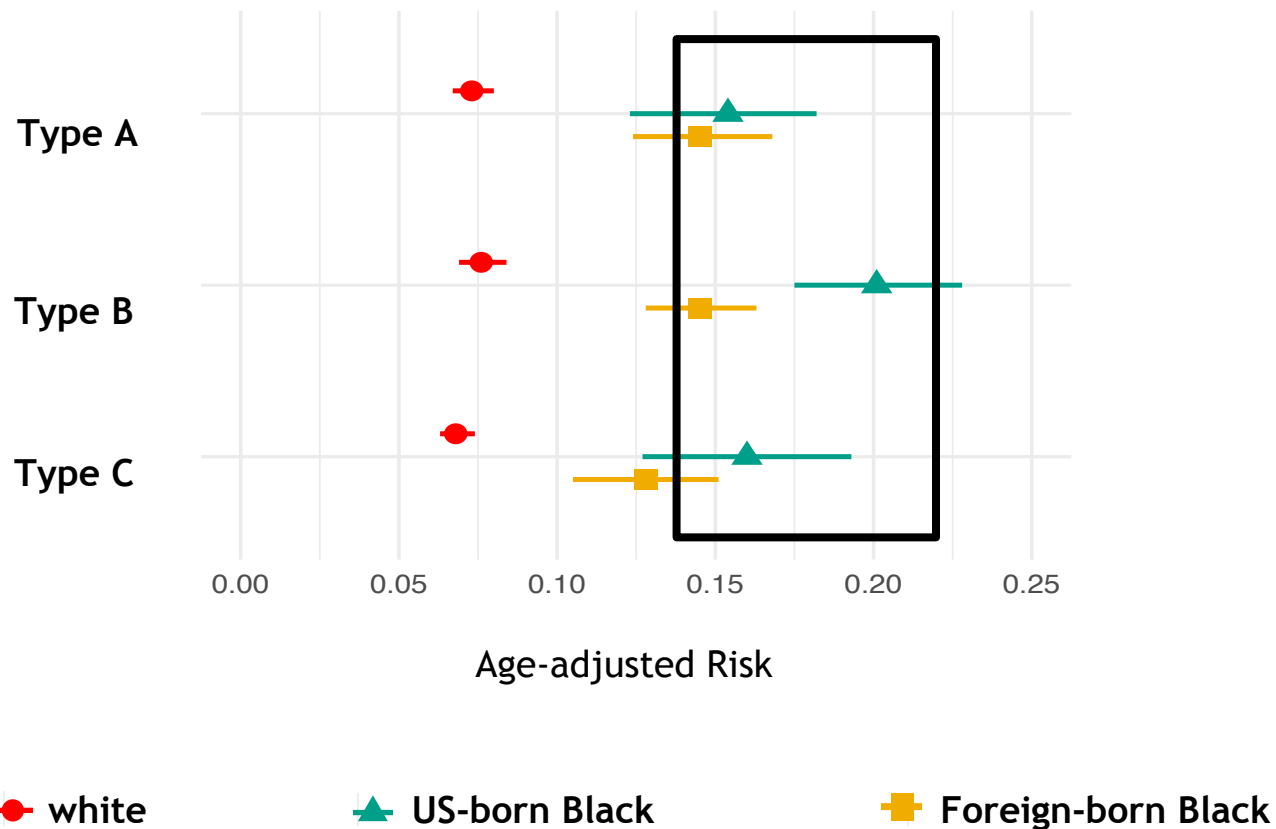
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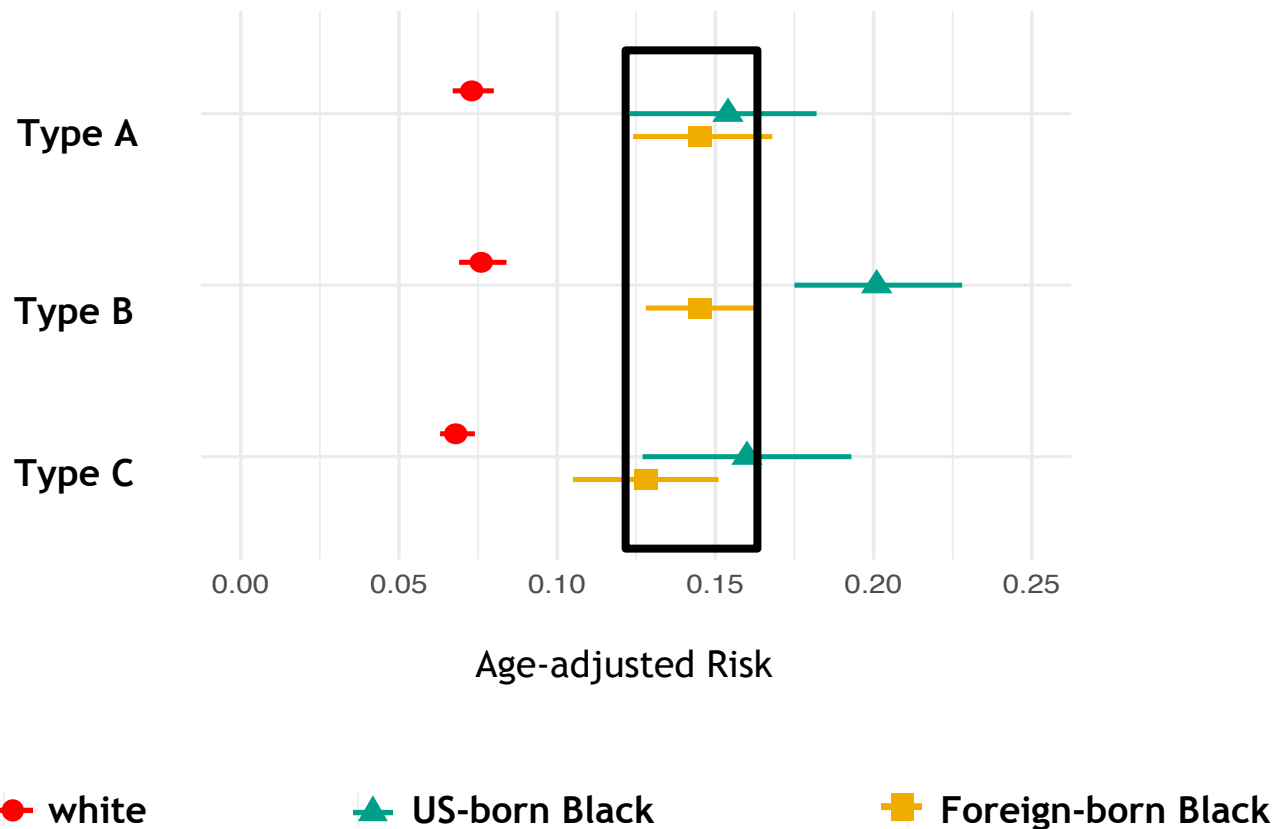
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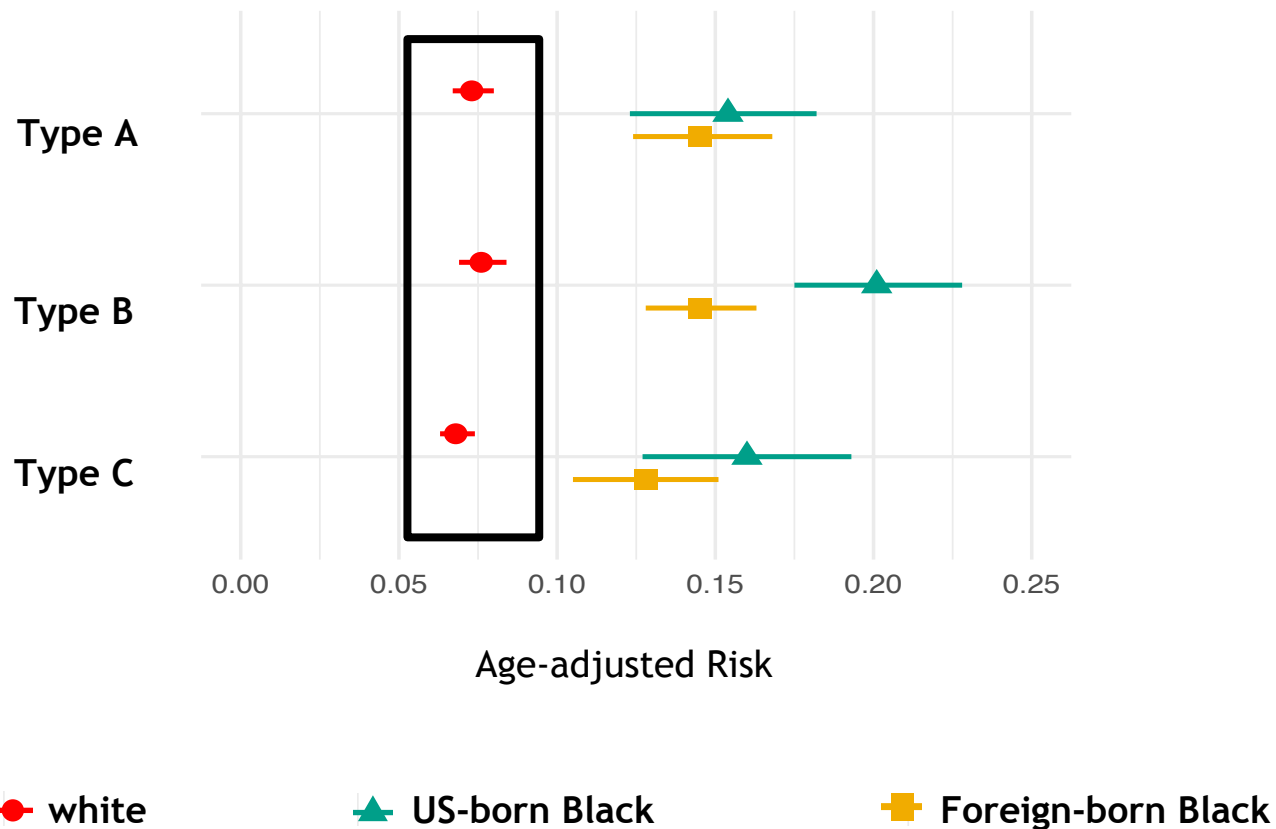
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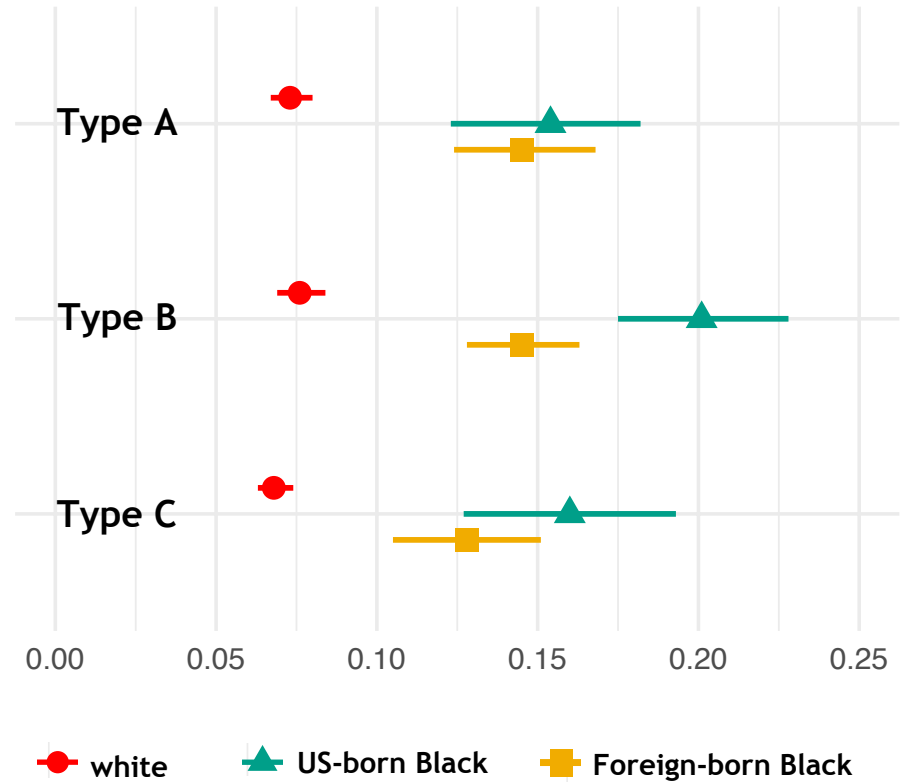
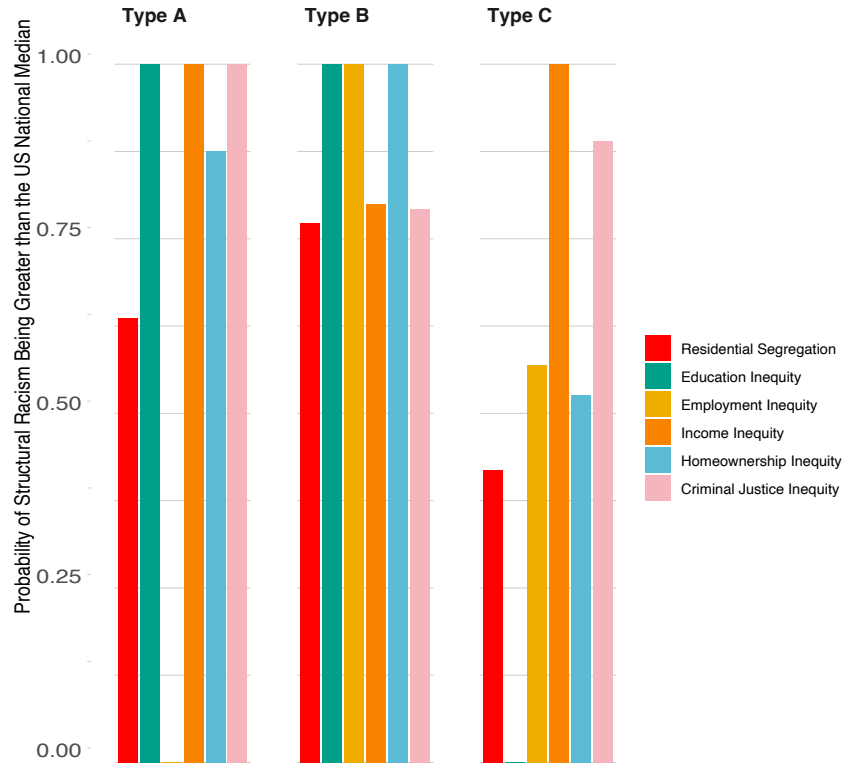


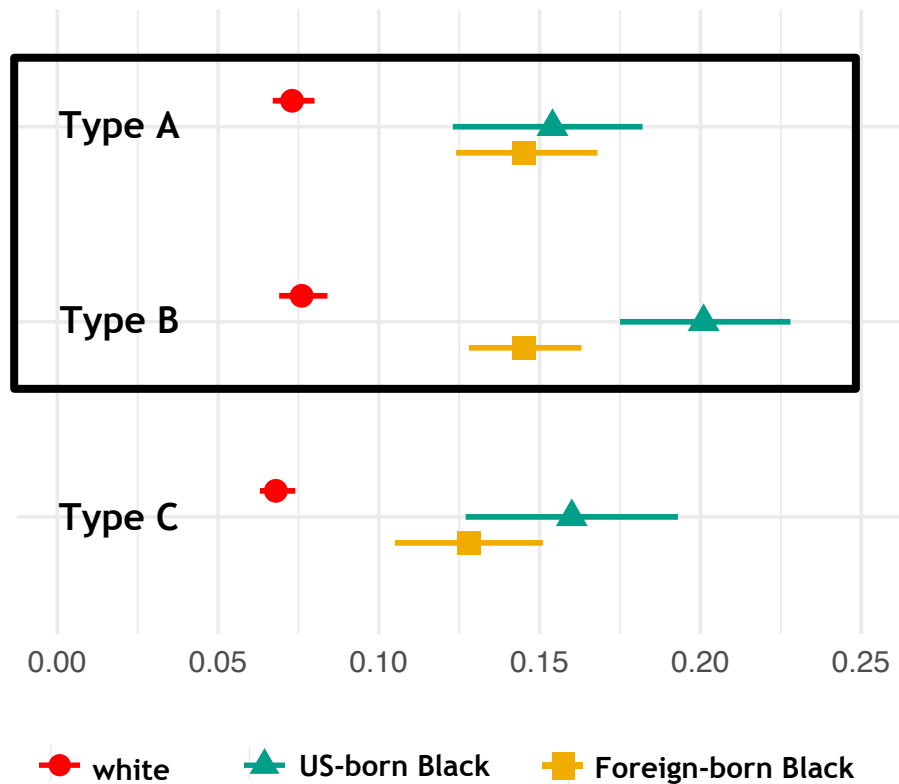
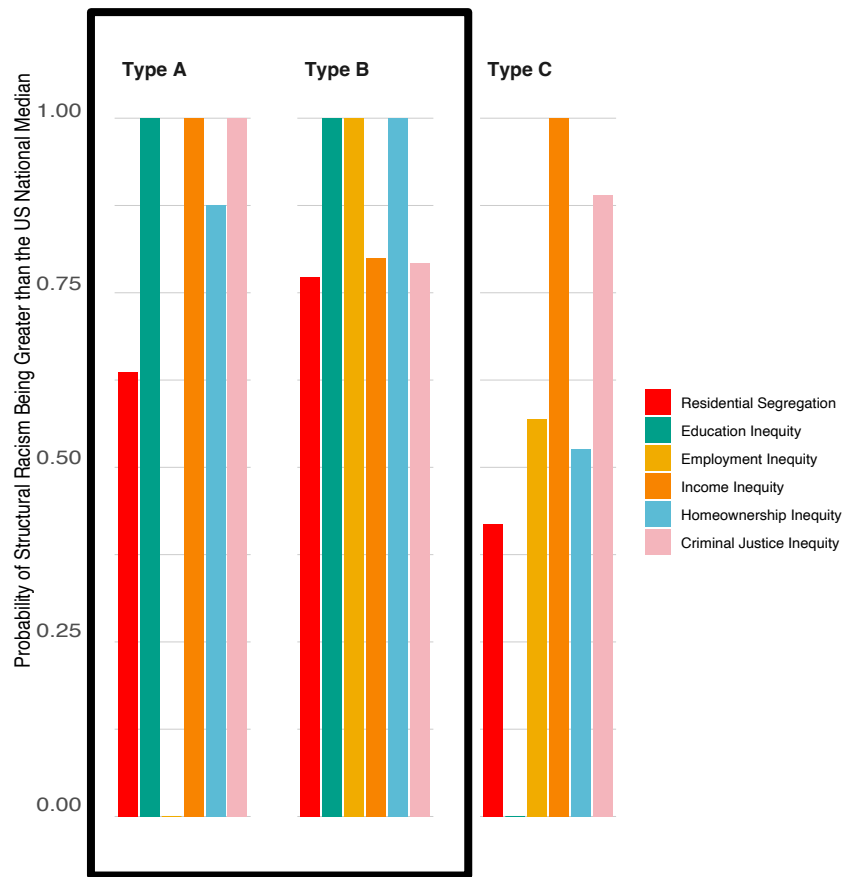
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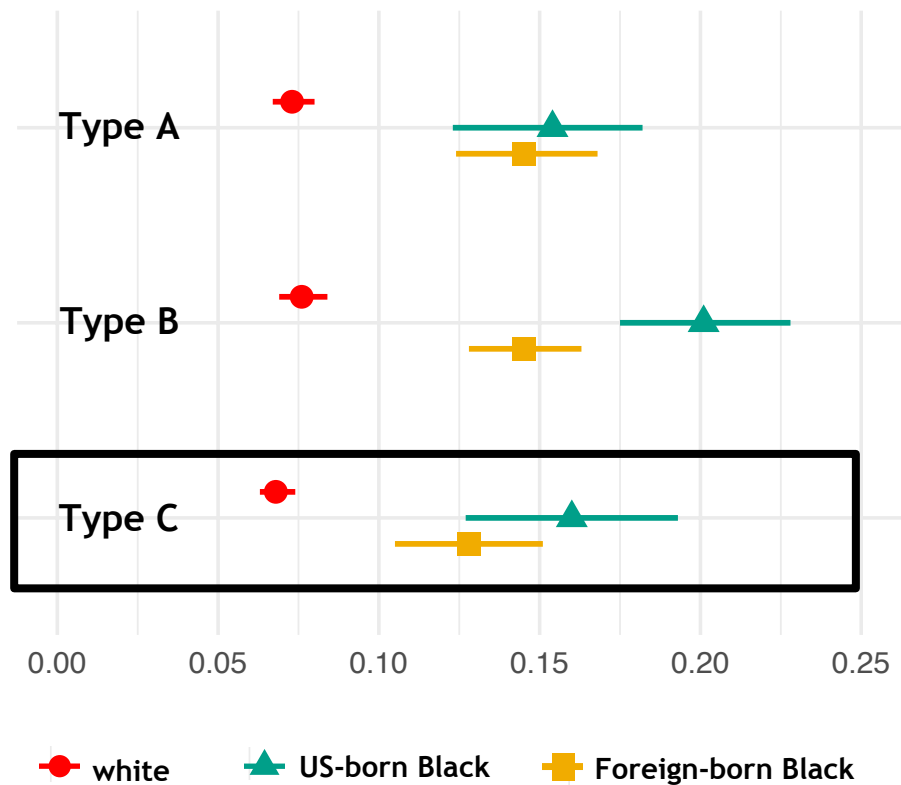
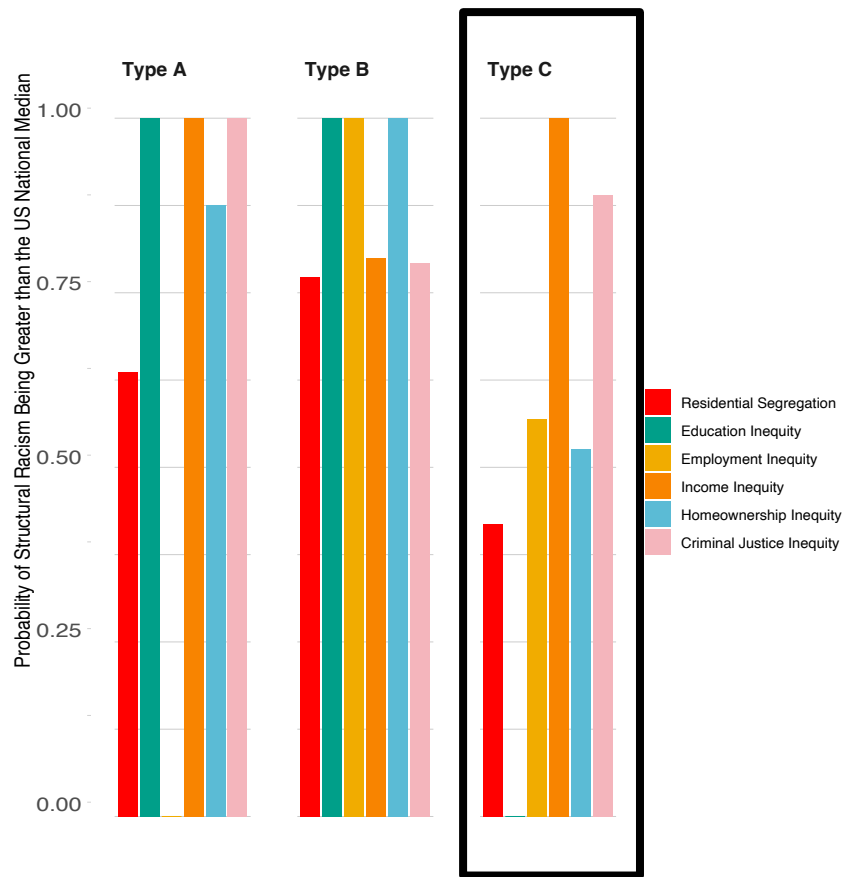


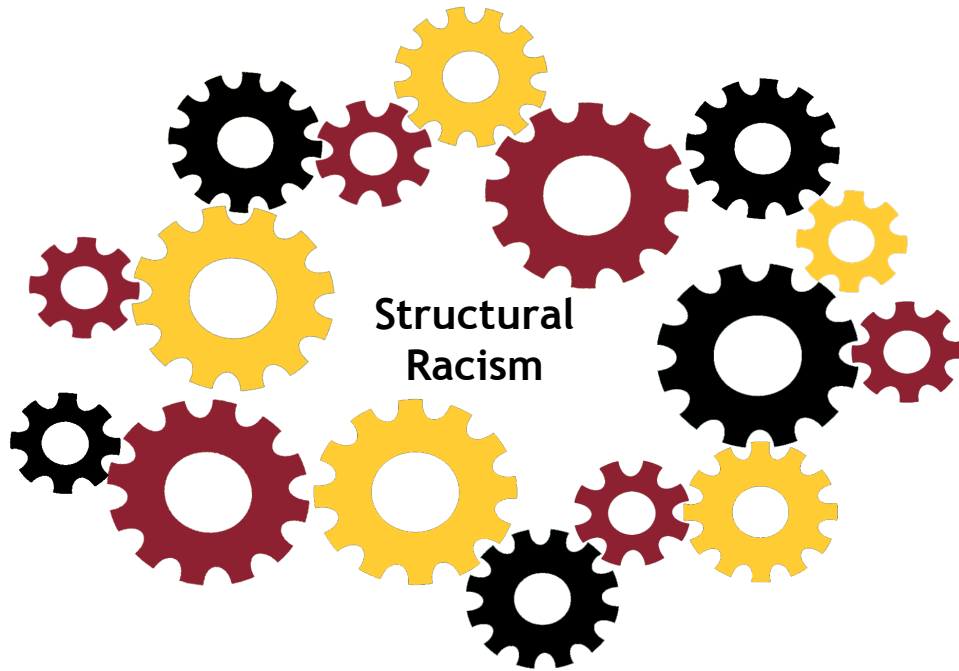
Small for Gestational Age











Key Takeaways

- Intricate interactions across structural racism dimensions
- Address all dimensions of structural racism to effectively eliminate racial inequities
- Multi-sectoral policy interventions are needed



Multidimensional structural racism predicts birth outcomes for Black and White Minnesotans

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Abstract

Objective: The objective of this study is to determine the linkage between multidimensional structural racism typologies and preterm birth (PTB), low birthweight (LBW), and small-for-gestational-age (SGA) birth among infants of White, US-born Black, and foreign-born Black pregnant people in Minnesota.

Data Sources: The measures of structural racism were based on the 2017 American Community Survey 5-year estimates and the 2017 jail incarceration data from the Vera Institute of Justice. Birth outcomes of infants born in 2018 were based on birth records from the Minnesota Department of Health.

Study Design: We conducted a latent class analysis to identify multidimensional structural racism typologies in 2017 and related these typologies to birth outcomes of pregnant people who gave birth in Minnesota in 2018 using Vemunt's 3-step approach. Racial group-specific age-adjusted risks of PTB, LBW, and SGA by structural racism typologies were estimated.

Data Collection: Study data were from public sources.

Principal Findings: Our analysis identified three multidimensional structural racism typologies in Minnesota in 2017. These typologies can have high structural racism in some dimensions but low in others. The interactive patterns among various dimensions cannot simply be classified as "high" (i.e., high structural racism in all dimensions), "medium," or "low." The risks of PTB, LBW, and SGA for US-born Black pregnant Minnesotans were always higher than for their White counterparts regardless of the typologies in which they lived during pregnancy. Furthermore, these excess risks among US-born Black pregnant people did not vary significantly across the typologies. We did not find clear patterns when comparing the predicted risks for infants of US- and foreign-born Black pregnant people.

Conclusion: Multidimensional structural racism increases the risks of adverse birth outcomes for US-born Black Minnesotans. Policy interventions to dismantle structural racism and eliminate birth inequities must be multi-sectoral as changes in one or a few dimensions, but not all, will unlikely reduce birth inequities.

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