Racism as a Public Health Crisis: A Review on Health Outcomes Among Minority and Ethnic Groups Facing Discrimination

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Abstract

Within the Public Health interest group (IG), our members elected to identify a prominent issue within the realm of public health that we all thought could use more attention. Consideration was given to many public health concerns until we ultimately decided to delve into the undeniable influences of racism on public health for this project. A literature review centered around the impact of racial discrimination on four primary effectors of health (environmental health, mental health, gun violence, and food insecurity) was conducted with the goal of evaluating how racism can perpetuate so many of the negative health outcomes disproportionately observed in communities of color. In completing this literature review, we sought to highlight some of the prolific health disparities linked to racial discrimination and how they directly affect minority groups; these aims were largely accomplished through the pooling and interpretation of published data on the four major effectors of discrimination-based health that we delineated prior to our literature search. Through our review work, we were able to identify resounding discrepancies among the health outcomes of racial groups subject to persistent discrimination in comparison to racial groups not exposed to frequent discrimination. For future continuation of this project, we believe it would be advantageous to formulate an applicable study or conduct more research on potential solutions addressing some the discrepancies presented in this project.

Background

The Public Health IG is one of eight UST/AHEC-sponsored groups; other groups include the pediatrics, adolescents, geriatrics, women's health, behavioral/mental health, social justice, and healthcare advocacy and policy IGs. This group is primarily student led and made up of first and second year students who ranked their preference in interest groups at the beginning of the academic year and were assigned to groups thereafter. Specifically, our constituency is comprised of 16 members, 2 co-leads, 1 senior UST coach, and 1 alumni partner. The alumni partner, Chinenye Anyanwu, PharmD, MPH, is a licensed healthcare professional. The senior coach, Hank Weinstock, is a third year medical student. The co-leads are two second year students; Somachi Ozuzu (nursing student) and Gabriela Resto (pharmacy student). Besides the co-leads and senior coach, there are 2 nursing students in our group (Olivia De Paola, Bella Hamilton), 4 medical students (Abhishek Gupta, Ashley Hine, Sulaikha Buuh, Khaoula Ben Haj Frej), 3 dental students (Emma Bergstrom, Juan Mitchell, Tyler James), 2 pharmacy students (Kat Irani, Jennifer Hwang), 2 physician assistant students (Hayley Merrill, Simon Ebbott), and 1 social work student (Ramsey Williams). Throughout the academic year, our interest group met a total of 6 times on predetermined Thursdays each month from October to April (excluding December). As the Public Health interest group, our focus is towards the epidemiology of illnesses common to underserved CT populations and the use of widespread interventions to help diminish existing health disparities. Our mission as a group hinges on the recognition of factors seen to promote disparate outcomes in the vulnerable and underserved populations, while also evaluating plausible routes to incorporating effective interventions.

Our goals for the year were determined at our initial meeting, and they included inviting public health experts and advocates to speak at our monthly meetings, participating in community health efforts, and conducting research as a group. Unfortunately, our monthly meetings were held virtually due to the COVID-19 pandemic. Pandemic-related limitations did result in our group achieving less of our goals than anticipated; however, we were able to share research presentations with one another. At our January meeting, our co-leads shared a presentation entitled "Racism as a Public Health Crisis" in which they defined racism and social determinants of health (see below) and introduced us to DataHaven, which has town equity reports and other Connecticut-specific data resources. During our February meeting, the other IG members presented four other presentations on racism and various aspects of public health.

Understanding Racism
- According to the CDC, racism is defined as a "system—consisting of structures, policies, practices, and norms—that assigns value and determines opportunity based on the way people look or the color of their skin."
- Race as a wholly social construct categorizes individuals based on a number of easy accessible physical characteristics such as skin tone, bone structure, facial features, and hair type among others. It acts as a social classification that influences behavior, politics, and norms. Such marginalization of people based on easily recognizable, exoteric traits has been shown to perpetuate glaring disadvantages apparent in access and opportunity, ultimately leading to disproportionate health outcomes.

Impact of Discrimination on Social Determinants of Health
- Social determinants of health are leading health indicators that account for the breadth of external factors seen to directly influence individual and group health (e.g., conditions in which people live, grow, work, and age, economic stability, education, physical environment, etc). As a result of systemic and interpersonal racism, communities of color are more likely to experience social inequities and worse health outcomes.
- In the U.S., there is an approximated 7 year difference in life expectancy between racial/ethnic populations. Black individuals are three times more likely to die during a police encounter compared to white individuals, and one in a thousand black males will be killed by police in their lifetime. Additionally, during the COVID pandemic, data has shown that Black, American Indian/Alaska Native, and Hispanic Americans have a COVID-19 mortality rate more than three times that of white Americans. People of color are also more likely to suffer from "weathering" (stress and adverse health outcomes sustained from coping with chronic toxic stress, often times due to systemic racism and bias).

Objectives

- To elucidate some of the prolific health disparities linked to racial discrimination that continue to afflict minority populations throughout the state of Connecticut and the U.S., including environmental health, mental health, gun violence, and food insecurity
- To address how racism affects opportunity and access to health resources pertinent for adequate health maintenance
- To aggregate and interpret relevant data on outcomes tied to the key effectors of discrimination-based health identified for this project

Methods

The Public Health interest group first delineated four primary effectors of racism in public health: environmental health, mental health, gun violence, and food insecurity. Each of these four effectors (Figure 1) were then researched by four interdisciplinary groups formed from members of the interest group, all tasked with conducting a literature review on one of these subtopics and their respective incidences across the state of Connecticut.

These groups then reported back to all members of the interest group for data sharing and interpretation. Findings and key data points presented by each group were then collated for the purposes of this review and utilized for an integrative assessment of effector impact among minority demographics within and outside Connecticut.

Figure 1. Key effectors of discrimination-based health
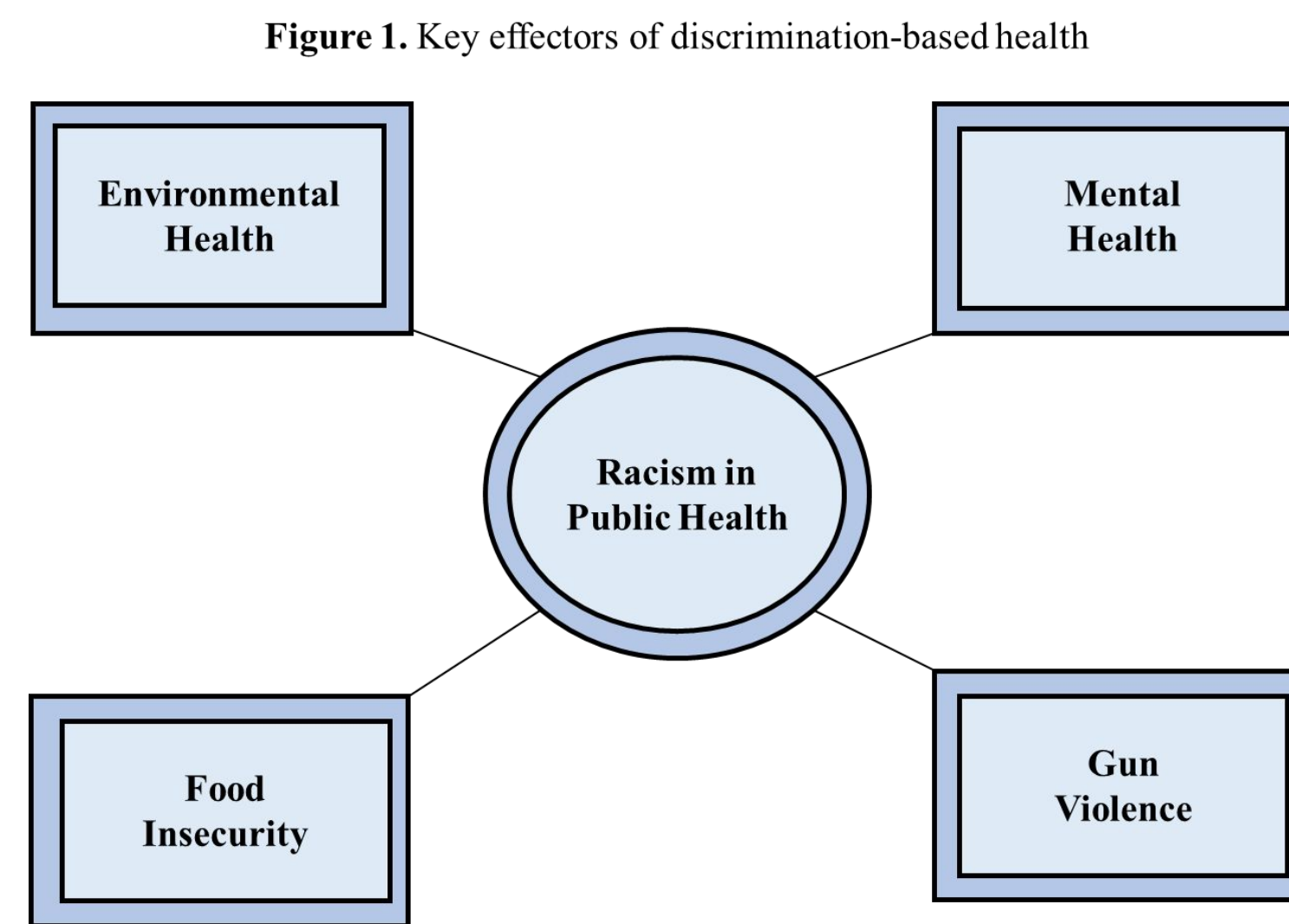
Results

Environmental Health (Sulaikha Buuh, Khaoula Ben Haj Frej, and Tyler James)

- Environmental health can be classified as an extension of environmental racism
- Growing issue of climate change and environmental justice
  - Growing evidence nationally and statewide that clearly shows low-income, racial and ethnic groups are exposed to higher than average amounts of environmental pollution
  - Age-adjusted percentage for children under 18 in 2018 (14.2% black, 5.6% white)
- Over 600 pollution sources in Bridgeport, Hartford, New Haven, Stamford and Waterbury
  - 19% of the state's pollution
  - 51% of the state's population in poverty
  - 71% of the state's minority population
- According to a 2020 Connecticut study, both Hispanic and Black children are nearly five times more likely to suffer from asthma than white children

Mental Health (Hayley Merrill, Katayun Irani, Jennifer Hwang, and Emma Bergstrom)

White & multiracial populations are more likely to seek mental health services when compared to other racial groups. Structural barriers, cost + insurance coverage, & stigma are the three most common reasons why non-white communities may not seek help.

- Substance abuse is a prevalent problem problem and diverse communities are at higher risk for many reasons, including:
  - Number & access to recovery resources
  - BIPoC are 2.5x more likely to be incarcerated for use & distribution of illicit drugs
  - Weaponization & stereotypes are used to target specific individuals
- Allostatic load & the weathering hypothesis may also contribute to addiction rates
  - Allostatic Load → physiological profile influenced by chronic life stressors
  - Weathering Hypothesis → chronic exposure to stressors (i.e. racial discrimination) results in 'weathering' of Black & African American individuals when compared to their white counterparts
- Treatment availability discrepancies:
  - Methadone treatment has a higher abuse potential with no protective overdose factors
    - More are located in low-income neighborhoods
  - Buprenorphine treatment has a low abuse potential & a ceiling effect (limits overdose risk)
    - Require certified prescribers - lack availability of public sector providers in lower income communities

91% of buprenorphine patients were white vs 53% of methadone users were white (2006)

Figure 2. Mental Health Service Use in the Past Year among Adults, by Race/Ethnicity: 2015-2019. Annual Averages

Gun Violence (Olivia De Paola, Bella Hamilton, and Ashley Hine)

- In the United States, African American & Black individuals are 10x more likely to be a victim of fatal gun violence than white individuals
  - Black men are at a higher risk of being involved with gun violence involving law enforcement
  - Gun violence is more prevalent in lower-income urban areas
- For Hispanic and Black residents in the U.S., gun violence is the 2nd leading cause of death
- There is work to be done in order to ease the burden of gun violence, some ideas include:
  - More Research → helps to solidify evidence of strict gun laws being better for public safety
  - Gun Policy Legislation → APHA supports requiring background checks for firearm purchases (this would limit those with a criminal history or severe mental illness from acquiring a weapon)
  - Risk Protection Orders → allows family members or law enforcement to remove a firearm from someone's possession if they are prohibited
- Push for local senators to support the Background Check Expansion Act
  - Helps guns stay in the hands of people who know how great of a responsibility owning a firearm can be
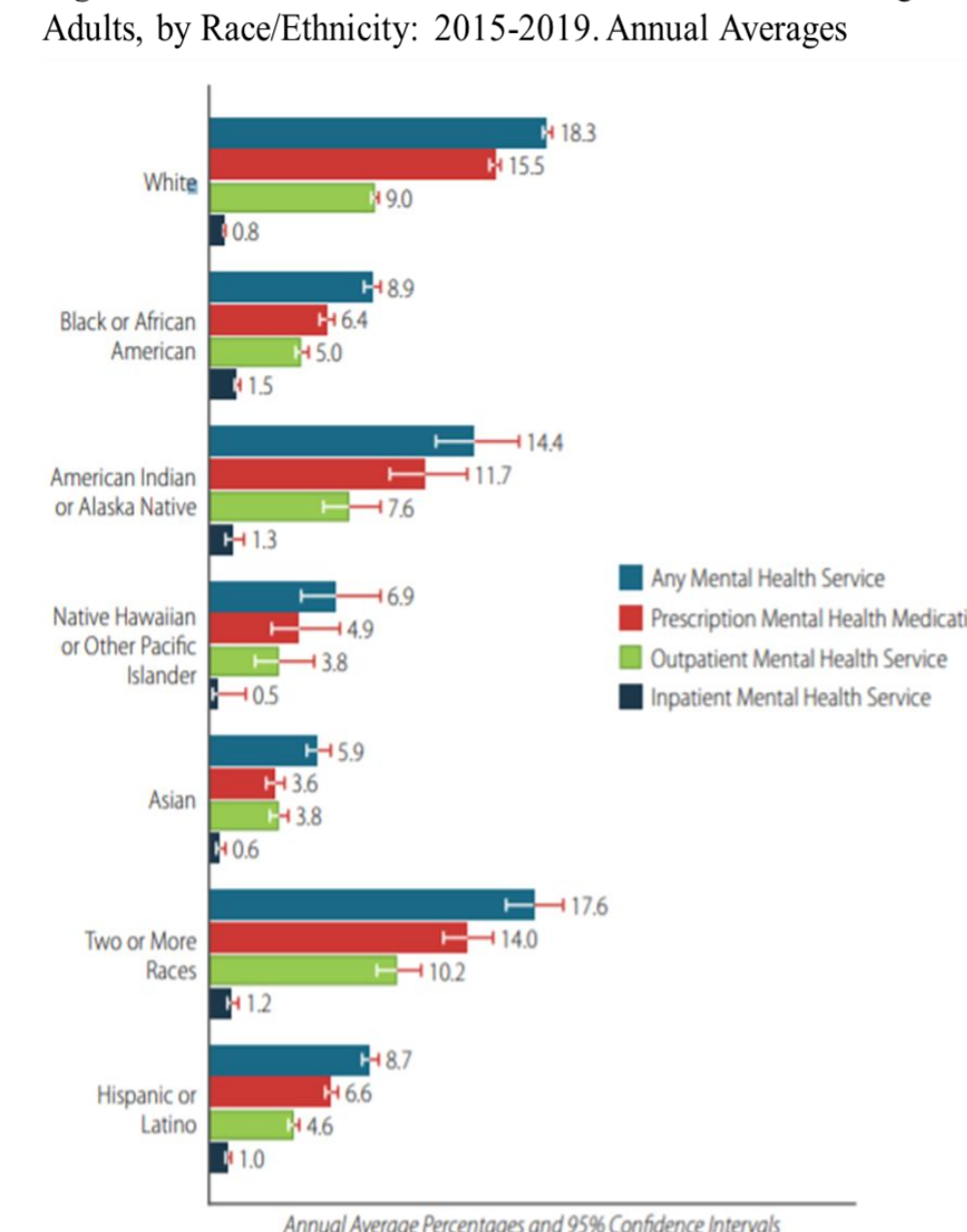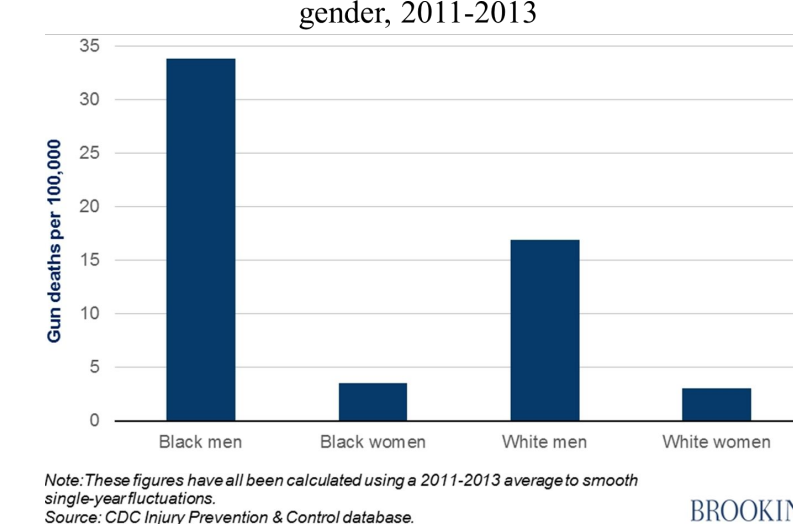

Figure 6. U.S. gun deaths by race and gender, 2011-2013

Results (Cont.)

Food Insecurity (Abhishek Gupta, Juan Mitchell, Ramsey Williams, and Simon Ebbott)

- Food insecurity is defined as "a household-level economic and social condition of limited or uncertain access to adequate food" (USDA)
- 10.5% (13.8 million) of U.S. households were food insecure at some time in 2020 (Myers and Painter, 2017)
  - 21.7% of Black, non-hispanic households
  - 17.2% of Hispanic households
- 12.4% of CT households were defined as food insecure in 2015 (Bohem et al, 2019)
  - 25% reported experiencing food insecurity every month
  - Black and Hispanic households are 3x more likely to experience food insecurity than White and Asian households
  - 67.4% of respondents from food insecure households are overweight or obese

Figure 3. Percent of Respondents with Children Reporting 'Food Didn't Last, No Money to But More': 2018 and April-June 2020, by Race/Ethnicity

Notes: 2018 data from NHIS. April-June 2020 data from COVID Impact Survey.
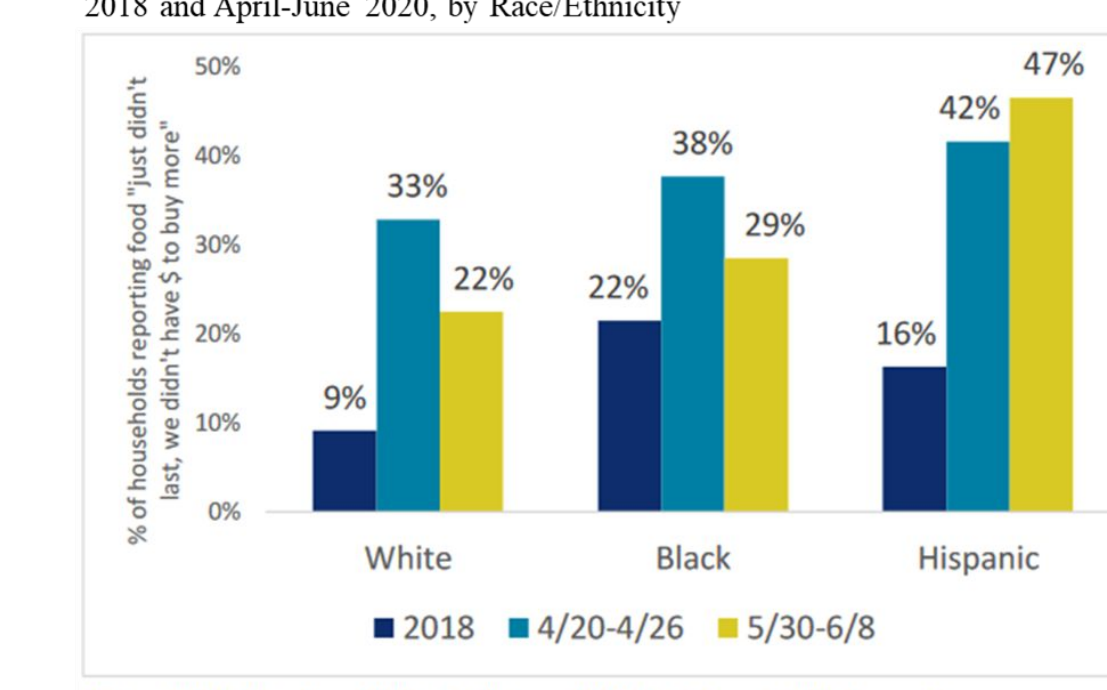

Figure 4. Rates of Food Insecurity by Household Respondent Race/Ethnicity in Connecticut
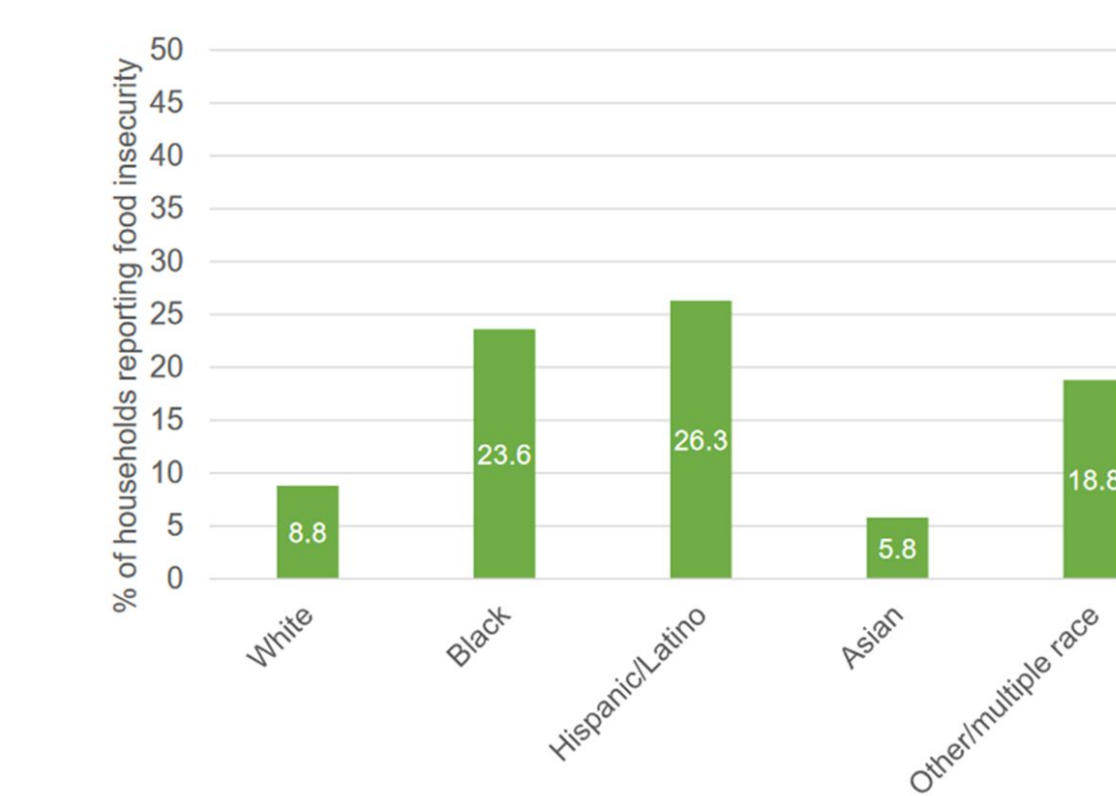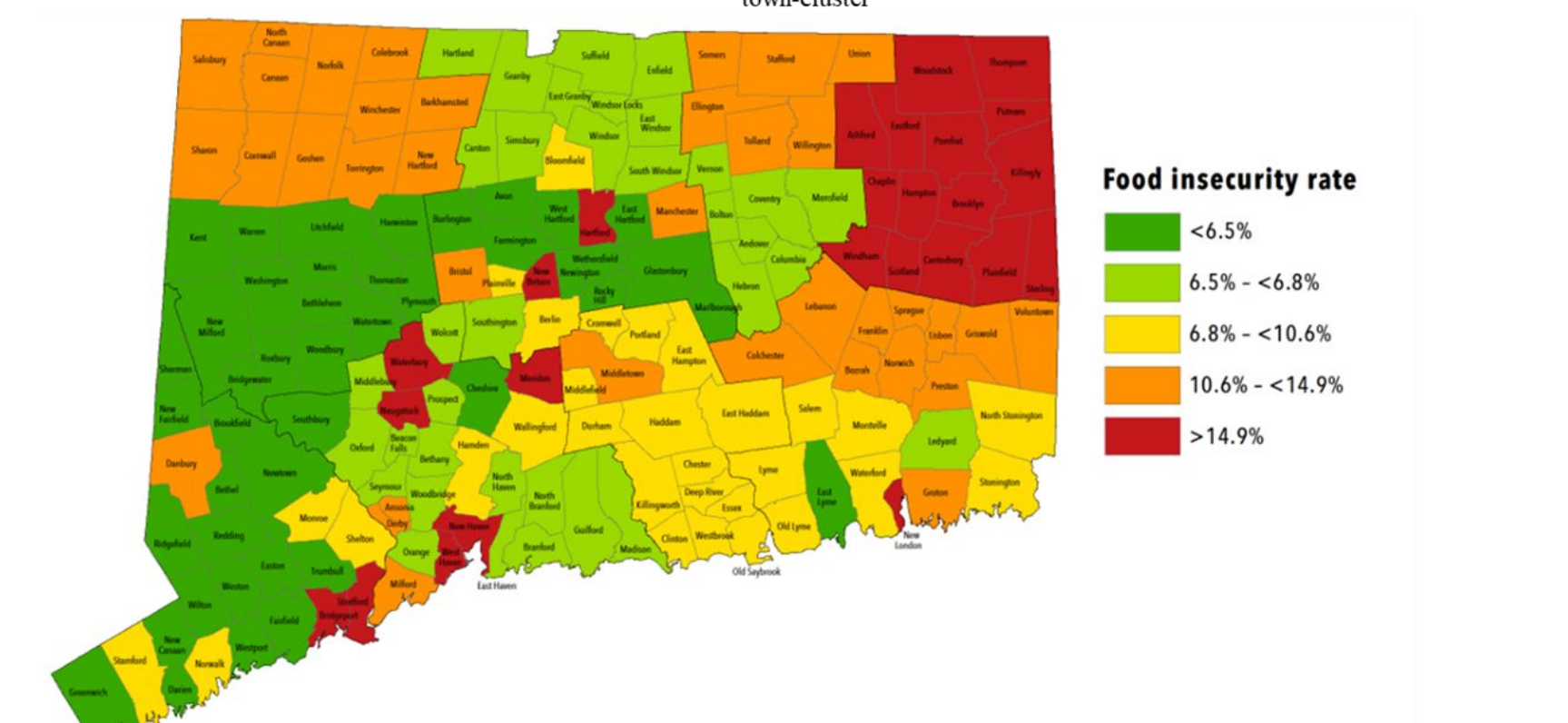

Figure 5. Percentage of Connecticut households reporting food insecurity (i.e. insufficient funds to buy food in the last 12 months) by town or town-cluster

Food Insecurity rate
- <6.5%
- 6.5% - <6.8%
- 6.8% - <10.6%
- 10.6% - <14.9%
- >14.9%

Discussion and Future Directions

Overall, our research review has made it evident that public health is **complex, multifaceted, and intersectional**

- Environmental health, mental health, gun violence, and food insecurity are significant public health issues and worthy of public attention
- Racism and racial discrimination further exacerbate the negative effects of the above issues on the health of BIPoC
- Connecticut is not spared from any of the above public health issues, and it is important that future health care providers are introduced to and equipped to use resources such as Datahaven in order to better understand state-specific public health trends and challenges

Although our IG was not able to achieve all of our original goals due to unforeseen COVID-related circumstances and the online nature of group meetings, we encourage future Public Health IGs to:

- Hone in on one of the above issues and invite guest speakers who are experts on the topic to share what work they are engaging in at a monthly interest group meeting
- Design and execute a community engagement project within Hartford that brings awareness to and addresses the local impact of one of the above public health issues on CT residents

As future health care providers…
- We commit to a life of active learning regarding the impact of public health issues on our individual patients' health
- We commit to caring for our patients as whole beings–to understanding the impacts of pollution, crowded housing conditions, lack of access to addiction treatment, financial burdens, racism, and mental health conditions on our patients' well-being
- We commit to advocating for our patients and for policy changes that would allow for more equitable health care within our country

References

A full list of articles, papers, and other materials referenced for this literature review may be found using the QR code provided below:

Acknowledgements