

How did local health infrastructure and socio-political factors within different states and counties in the United States affect the disparities in COVID-19 outcomes, and what lessons can be learned for more targeted public health preparedness and response strategies in future pandemics?\*

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First sentence. Second sentence. Third sentence. Fourth sentence.

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\*Code and data are available at: <https://github.com/hannahyu07/US-Covid-Analysis.git>

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## 1 Introduction

*This reproduction was performed after a replication on the Social Science Reproduction platform: [link here](#)*

## 2 Data

### 2.1 Source

The datasets utilized throughout this paper was obtained from the **original paper** (Nuzzo and Ledesma 2023).

### 2.2 Methodology

R (R Core Team 2022) was the language and environment used for the bulk of this analysis, alongside **tidyverse** (Wickham et al. 2019), **sf** (Pebesma 2018), **readxl** (Wickham and Bryan 2023), **knitr** (Xie 2014), **janitor** (Firke 2023), **lubridate** (Grolemund and Wickham 2011), **dplyr** (Wickham et al. 2023), **data.table** (Barrett et al. 2024), **RColorBrewer** (Neuwirth 2022), **ggpubr** (Kassambara 2023), **ggplot2** (Wickham 2016), **here** (Müller 2020), and **scales** (Wickham, Pedersen, and Seidel 2023).

### 2.3 Data Measurement

### 2.4 Data cleaning

## 3 Results

Our results are summarized in Figure [1](#).

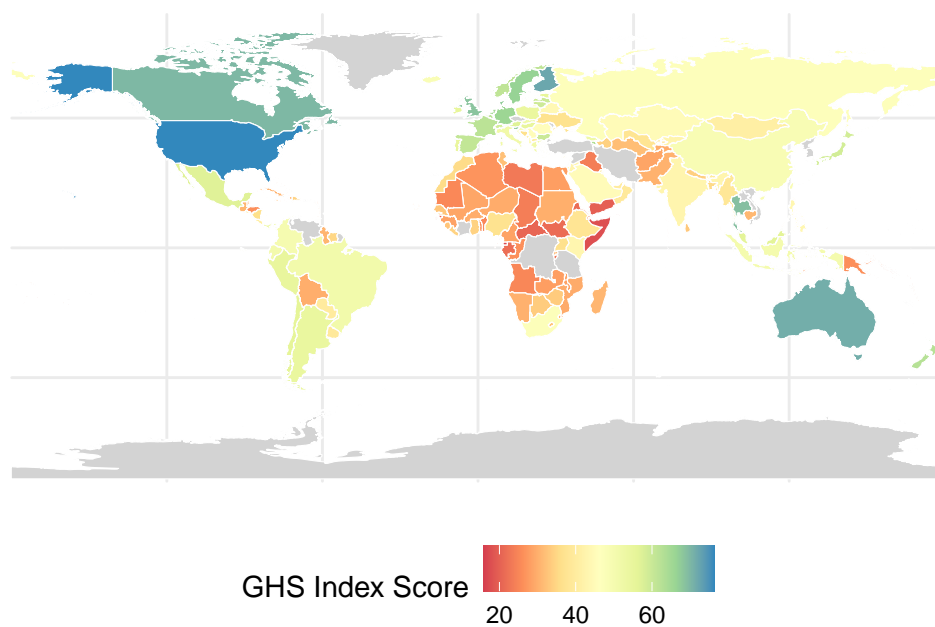


Figure 1: Global Health Security Index Scores by Country

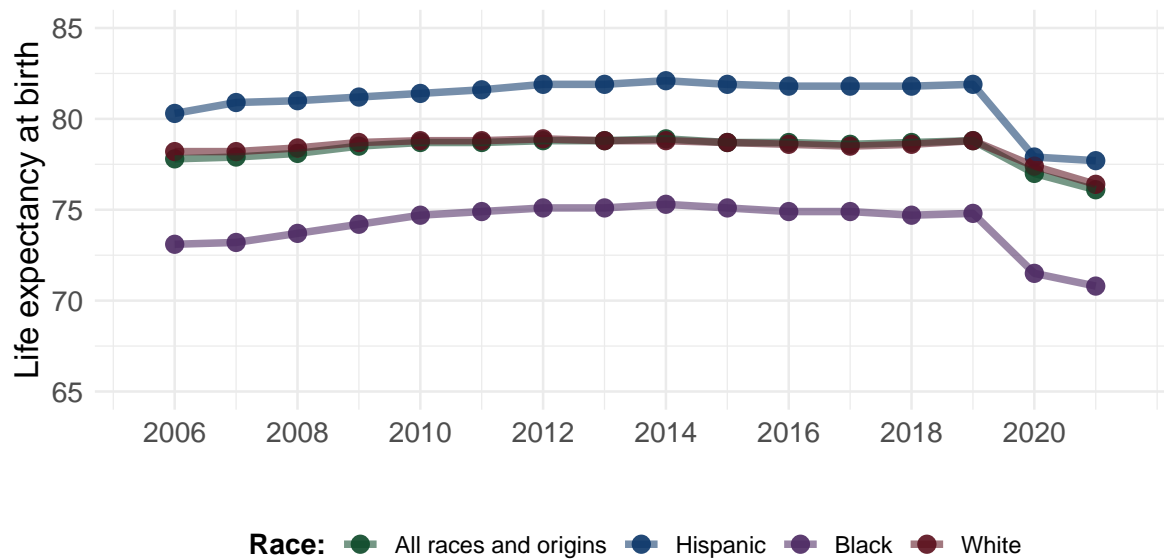


Figure 2: Estimates of Life Expectancy at Birth, by Race 2006-2021

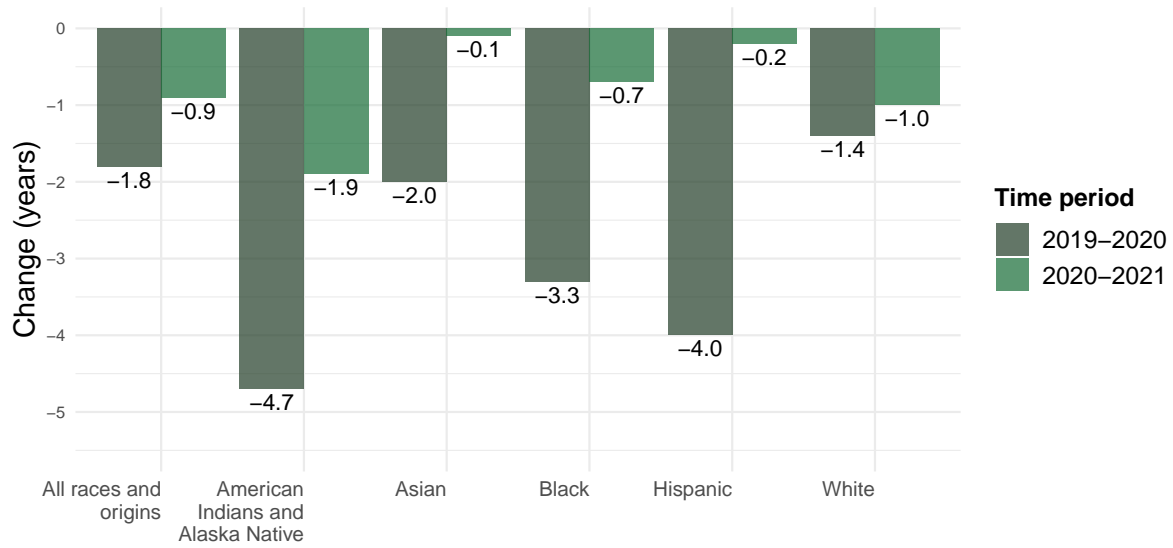
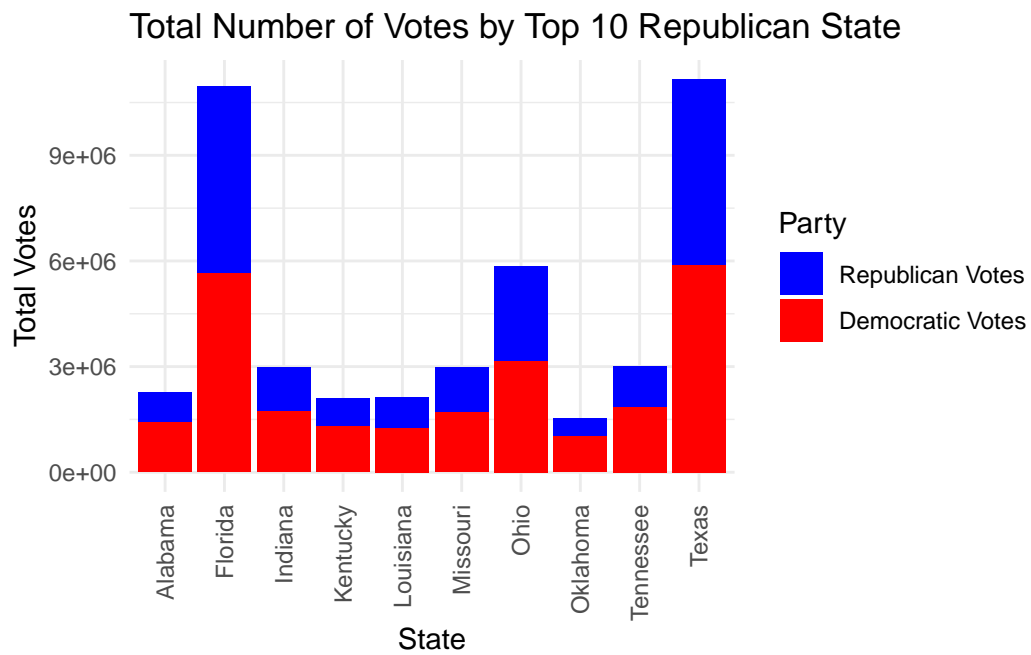


Figure 3: Change in Life Expectancy at Birth from the Previous Year



## **4 Discussion**

**4.1 Influence of political polarization on adherence to health guidelines.**

**4.2 Impact of government transparency and consistent communication on public trust.**

**4.3 Role of social vulnerabilities and healthcare access disparities in pandemic impact.**

**4.4 Strategies for improving real-time data collection and sharing for public health decisions.**

**4.5 Weaknesses and next steps**

Weaknesses and next steps should also be included.

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