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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1 Introduction

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

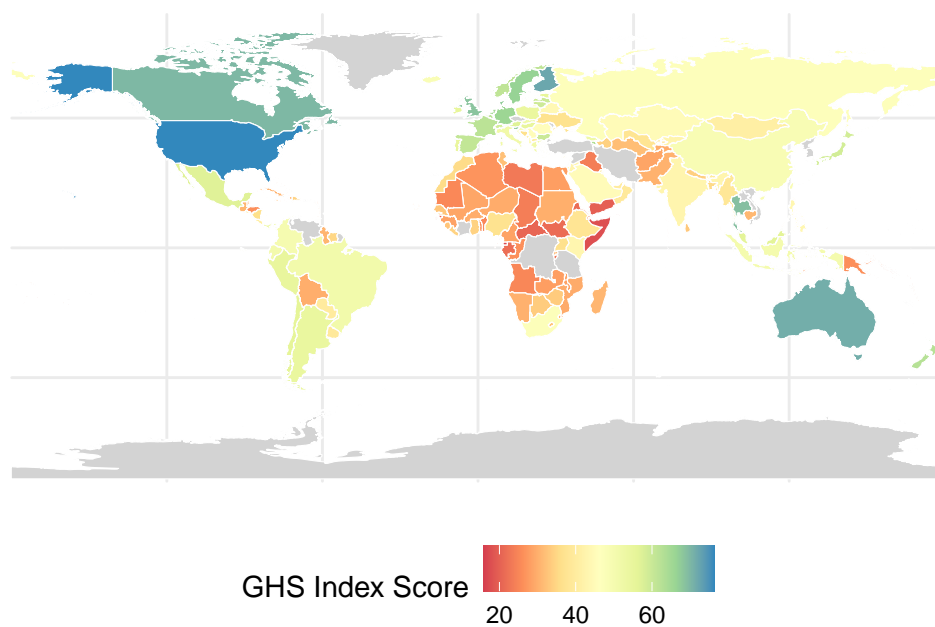# 3 Results

Our results are summarized in Figure 1.

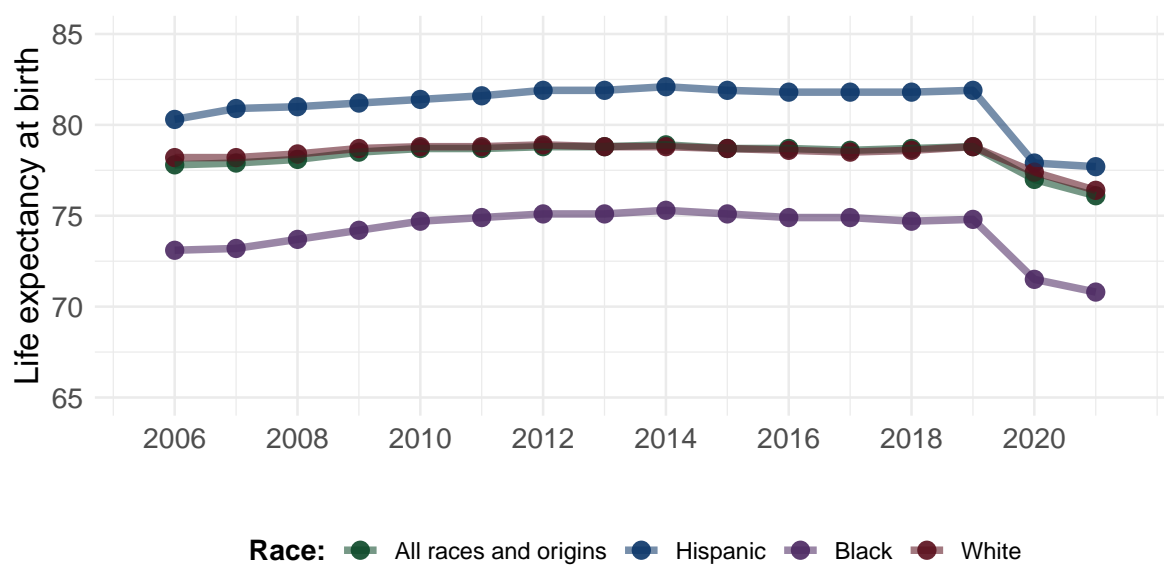Figure 1: Global Health Security Index Scores by Country

Figure 2: Estimates of Life Expectancy at Birth, by Race 2006-2021
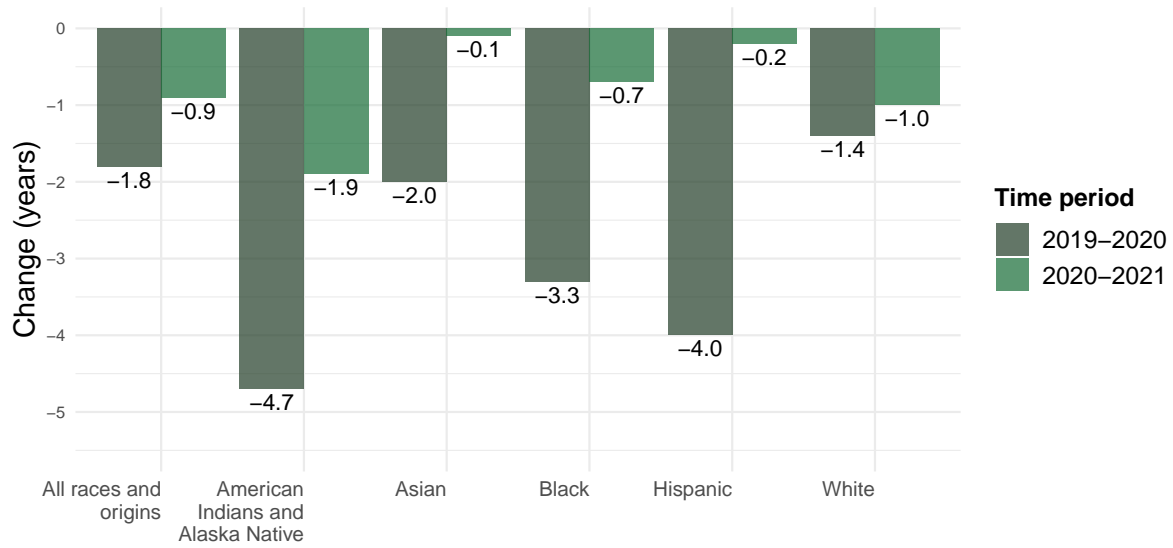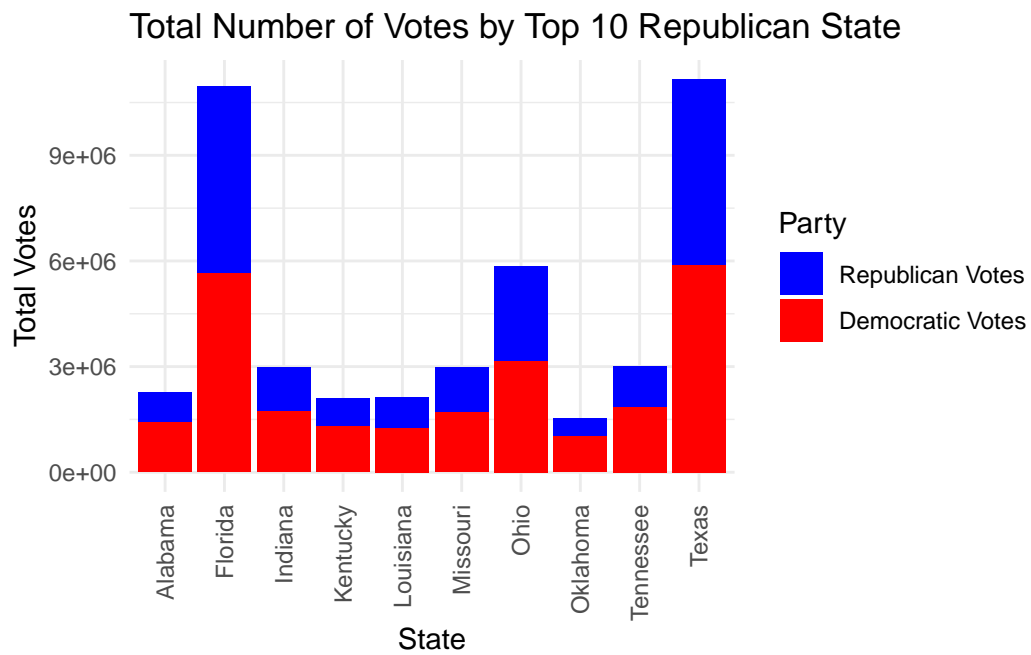
Figure 3: Change in Life Expectancy at Birth from the Previous Year

4 Discussion

This begs the question as to why we are seeing these results. There isn't exactly a single answer to this question, however we can certainly point out some considerable factors to this result.

4.1 Influence of political polarization on adherence to health guidelines.

Political polarization has significantly impacted the adherence to health guidelines during the COVID-19 pandemic. The divergence in political ideologies has translated into differing attitudes towards health directives, including mask mandates, social distancing, and vaccination uptake. Various studies and our own results have shown that areas with higher support for one political party exhibited distinct behaviors and compliance levels with health recommendations, which directly correlated with COVID-19 case rates and mortality. An news article from `ABC News` (Diab and Kumar 2023) shows that the top states with the highest COVID-19 deaths are Arizona, and Washington with 581 deaths and 526 deaths respectively per 100,000 people. According to 2020 presidential voting data published by `CNN`, we have both states having the electoral vote of democrat with Washington wining by 58% (*2020 Election Results by State, Washington* 2020) and Arizona winning by 49.4% (*2020 Election Results by State, Arizona* 2020). Another news article by `ContagionLive` (Parkinson 2023) also makes the claim of both Arizona and Washington having the highest COVID-19 mortality. This polarization has not only influenced individual behavior but also shaped state and local health policies, further entrenching the disparities in health outcomes.

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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