**COVID-19: Scientific or Political?**

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**Introduction**

Since the beginning of 2020, the rise and fall of the COVID pandemic has sparked trends across the United States. Full of strong views, misinformation, and political divisions, the pandemic became more than just about the spread of the virus. Since the first year of the pandemic, governments across the world sought to implement a wide variety of guidelines to slow the spread of the pandemic. From school and work closures to stay-at-home orders and social distancing regulations, countries and their residents began complying. Within the United States however, the measures and receptions have been diverse and unpredictable largely due to the growing political gap. As someone with a strong science and pharma industry background, I understand the mechanisms behind the virus. What I do not understand, and would like to research, is the social and political aspects of the pandemic we were not expecting.

**Overview**

While COVID posed a significant health risk, political influences and public perception led people to strongly divide. What caused the polarizing views over COVID, even though the science behind the pandemic proved only one factual outlook exists? Through my research, I have decided to focus on how the pandemic was politicized to the extent where it divided people’s opinions on the science with supporting. The following 5 main questions and theories drove my research:

* Did the COVID pandemic turn political throughout its course or have related driving factors?
* Are there obvious differences between regions that believed whether the pandemic was a real threat?
* Is there is a correlation between accepting mask or vaccine policies and geographic locations?
* Is there state data on vaccination rates that relates to a state’s political identity?
* Are COVID case rates related to regions where different pandemic policies may have been implemented i.e., social distancing and masks?

**Initial Findings**

I first searched “COVID” to prove the search’s timeline, and to demonstrate that it has been a significant topic of interest since the start of the pandemic across all states.

*Figure 1: “COVID” Google Trends*

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This graph visualizes the interest of COVID searches right as the pandemic started. The spikes in search trends relate to major COVID events, such as new vaccines and recorded outbreaks of new strains. Related searches include “COVID testing” and “COVID cases.” The data demonstrates that the interest in the pandemic is at least trackable to some extend with major related events.

I next wanted to understand if there was a general strive to understand that the pandemic was real or fake. Now that I have established that the trending searches are related to major scientific or political events, exploring the validity of the pandemic can be observed through searches. I searched for “COVID fake” to understand if there’s a pattern to the search, or if it had been searched at all.

*Figure 2: “COVID fake” Google Trends*

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The data visualize here is unique to interpret. It seems that the major peaks for “COVID fake” correlate with major events. For example, the second and third large peaks occurred during the final stages of the presidential election, and the single largest search peak spanned during the largest pandemic breakout season when transmission rates were at their highest.

Additional top related searches included “fake COVID test” and “fake vaccine.” Where were these additional ideas coming from? I also noticed a stronger breakdown of search frequencies as these “COVID fake” searches were more prominent on the east and west coastal states. With trend research completed, next is to understand how people’s views of the pandemic affected their choice of adopting safety measures – if there are regional or political driving forces that demonstrate these patterns, and how it can all relate to vaccination and disease transmission rates. Looking at geographic political locations will enable me to draw the correct conclusions, as directed by relevant survey data.

**Further Data Analysis**

After establishing that there is likely a trend between the response to the pandemic and people’s curiosity driven by political or scientific events, I explored direct correlations between the different perceptions of the pandemic depending on whether people identify as Democrat or Republican. One of the easiest ways to understand the bias is to ask the citizens themselves, where a vast amount of survey data can be utilized.

To confirm that political beliefs can influence one’s decision, a survey of 3000 citizens in March of 2020 found that partisanship is the single most consistent factor found across the group when asked what influences their behaviors and policy understandings. When it came to COVID guidelines instilled by the government, a Pew Research study in June of 2020 demonstrated that a majority of Republicans downplayed the health concerns only a couple months into the pandemic, whereas a majority of Democrats remained cautious of the pandemic well into the summer of that year. A poll by NBC News in the Summer of 2020 showed that 48% of Republicans wore a facemask outside of home compared to a staggering 86% of Democrats who adopted the rule. Republicans generally are more concerned about financials due to the nature of their political party’s views, which translated into heightened economic concerns during the pandemic. As a result, the same NBC News survey outlined that 67% of Republicans viewed the pandemic as more of an economic crisis primarily rather than a health crisis, whereas only 17% of Democrats believed in the same prioritization. Understanding the limitations of surveys and assuming minimal response bias, the data hints that the divide between Democrat and Republican responses to the pandemic influence individual perception and decisions. How this relates to guidelines and acceptance by individual states will be a large factor in determining how politically divisive the pandemic was.

To understand how partisanship and pandemic acceptance extends beyond just survey results, it’s important to explore objective data instead of relying on personal subjective views through a survey. Examples of both Republican and Democrat counties and states will need to be explored and use statistical data such as vaccination rates, to understand if there is a correlation between political partisanship and pandemic acceptance. I turned to an analysis completed on the data of populations fully vaccinated by county, from the Centers for Diseases Control and Prevention (CDC). This data was integrated into the 2020’s election results, to compare vaccination rates against Democrat and Republican counties. Across the United States as of September 13, 2021, 52.8% of people in counties that voted Democratic were fully vaccinated, compared to 39.9% of counties that voted Republican. As a final data point, there is a 12.9% difference in vaccination rates between the two partisan counties however, a hidden diverging trend demonstrates that the gap has widened over time throughout 2021. In April 22 of 2021, the vaccination rate difference between the partisanships by counties was 2.2%. This rose to 6.5% by May 11 of 2021 and on to 11.7% by July 6 of 2021, finally arriving at 12.9% by September 13 of 2021.

Looking at a greater perspective over counties, there is a larger divide when comparing state partisanship and their respective vaccination rates. In combination with CDC data and U.S. News, the table below outlines 10 states with the highest COVID vaccination rates and 10 states with the lowest COVID vaccination rates. The states were compared to 270toWin’s data to determine whether the state is primarily Democrat or Republican and was done through comparing prior presidential election data as well as the likelihood of revoting the same party.

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| --- | --- | --- | --- | --- | --- |
| **States With Lowest Vaccination Rates** | | | **States With Highest Vaccination Rates** | | |
| State | Vacc. Rate | Party | State | Vacc. Rate | Party |
| Wyoming | 52.8% | Republican | Rhode Island | 87.1% | Democrat |
| Alabama | 52.9% | Republican | Vermont | 85.0% | Democrat |
| Mississippi | 53.5% | Republican | Massachusetts | 83.6% | Democrat |
| Louisiana | 54.8% | Republican | Maine | 82.8% | Democrat |
| Tennessee | 56.1% | Republican | Connecticut | 82.6% | Democrat |
| Idaho | 56.2% | Republican | Hawaii | 81.1% | Democrat |
| Arkansas | 56.6% | Republican | New York | 80.2% | Democrat |
| Georgia | 56.9% | Republican | Maryland | 79.2% | Democrat |
| Indiana | 57.5% | Republican | New Jersey | 78.6% | Democrat |
| North Dakota | 58.3% | Republican | Virginia | 76.1% | Democrat |

The 10 states with the lowest vaccination rates are all exclusively Republican, while the 10 states with the highest vaccination rates are all exclusively Democrat. A near-25% average difference of vaccination rate exists between the two parties of states.

**Assumptions**

Survey data is known to easily be affected by bias, where there is a deviation of feedback based on certain influences by the surveyor and responder. Some influences include, but are not limited to, sampling bias and response bias. Sampling bias is where preferred groups of people are systematically more likely to be chosen in a sample. Though this may be advantageous in smaller scenarios, this can be detrimental when conducting surveys on a large scale. Response bias is altered insights from responders whose submitted answers deviate from how they truly feel and can result in misleading results no matter the scenario.

Analyzing survey data was a large factor in driving the continuation of researching this topic. I made assumptions on the integrity of the surveys I chose to analyze, and touched briefly on why the assumptions aren’t valid on their own. Generally, people are overly passionate about identifying with their political beliefs, so I felt safe to assume that survey data related to political identity is unbiased as people hardly mislead their personal political beliefs. To remove remaining potential bias from my assumption of correct survey data, I researched objective county and state statistical data that backs up the survey trends of how Republicans and Democrats both viewed the pandemic differently.

**Ethical Concerns**

The researched data demonstrates how the COVID pandemic went from not just a scientific endeavor, but to a political battle and forced social hardship. Individuals felt that their personal freedom was infringed upon, either forced to take a vaccine or discriminated for taking it depending on political identity. Masks went from keeping each other safe to openly advertising political identity, and unfortunately leading to violent confrontations in many states. Many faced the same ethical dilemma: should we remain individually free to be able to not practice pandemic rules as a chose, even if it meant at the potential expense of other’s lives? Partisanship drove the answer to the question according to the data as the pandemic progressed. Many of us can agree the pandemic was not handled to the best it could’ve been, and the blur between scientific and political ideologies gave rise to preventable ethical concerns.

**Challenges/Opportunities**

Reflecting on the research, one of the largest challenges I faced when searching for data and analyzing sources, was removing sources with emotional bias. The COVID pandemic spiked strong opinions as the nation divided amongst itself, and I came across many sources that were full of harsh conclusions and finger-pointing, placing blame on everyone else but themselves. Finding statistical data also proved difficult because most outlooks had a biased conclusion, and I preferred to arrive at conclusions myself for discussion rather than summarize someone else’s fierce remarks.

Additional reflection on the research can lead to an overall reflection of pandemic response, which can be used as an opportunity to learn. The nation has experienced how biased pandemic perceptions can be and the unethical ways to politicize it, as the data outlined demonstrates how personal thought processes can be greatly influenced. For any social situation, whether it’s a pandemic or political turmoil, we should use the COVID pandemic to study its outcome and use it as an opportunity to improve our shortcomings as a nation.

**Conclusion**

From broad initial findings to narrowed-down statistical data, there is evidence that supports how the COVID pandemic had underlying political forces that turned the pandemic into more than just a scientific challenge. Search trends indicate that individuals were lost at the start, turning to Google for quick answers on whether they should be concerned. Initial surveys demonstrated that most individuals are swayed the by their political identity and their party’s beliefs, and further surveys at the beginning on the pandemic showed a stark difference between Democratic beliefs and Republican skepticism. As the pandemic progressed, counties throughout the states began diverging with their vaccination rates based on political identity. Later still in the pandemic, the divergence moved up to the state level where the data became indisputable, as the 10 states with highest vaccination rates are all Democratic, and the 10 states with the lowest vaccination rates are all Republican. Personal beliefs and opinions aside, we can all agree that the pandemic rolled right out of our grasps, and that we should urge ourselves to use the pandemic as a social event to understand ways in which we as a nation can better prepare ourselves. The researched data tells a story from start to finish, showing that ethical reform is needed at all levels.

**Sources**

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