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COVID-19: An Optimal Strategy to Resume Life with Safety and Economic Prosperity

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COVID-19: An Optimal Strategy to Resume Life with Safety and Economic Prosperity

By

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ABSTRACT

The coronavirus pandemic has hit the world hard since the beginning of 2020, and the United States has certainly felt a negative impact. Many important aspects of life have been greatly altered by the pandemic, and this has resulted in a hindered economy. The purpose of this project was to determine if there is an optimal strategy with respect to policy and the economy that the United States could implement in order to mitigate the coronavirus. In order to determine this, I evaluated multiple aspects of the disease through a literature review. Upon review, I conducted a survey and performed analysis using raw data that I had gathered, and, through my research, I believe that valuable information has been gathered regarding approaches to this pandemic.

INTRODUCTION

Take a look around college campuses today, or really anywhere for that matter. Do you see lively, active crowds living their normal lives without a care in the world? Or do you see people living in fear or in a cautious manner? It is likely that you are seeing the latter. This is due to the global pandemic that we have encountered as a society. This global pandemic is referred to as "COVID-19" or "coronavirus". COVID-19 is a virus that was first identified in Wuhan, China. It is widely speculated that the virus originated in animals and eventually spread to humans. A popular theory of its origin is that the disease had been created and leaked by a laboratory in Wuhan. However, the World Health Organization has dismissed this theory (Meredith, 2021). Inevitably, the coronavirus has negatively impacted the United States over the past year, and it feels like a light at the end of the tunnel is still distant. With that being said, this project will dive into how the coronavirus has influenced the United States economy and the health of United States citizens. In addition, the policies and regulations that the United States has implemented will be discussed in order to answer one primary question: Is there an optimal strategy with respect to policy and the economy?

Four major areas will be taken into consideration, as this will allow the primary concerns to be addressed. First, the number of deaths and hospitalizations due to the coronavirus in the United States will be assessed, and symptoms of the virus will be discussed. Daily trends of the disease will also be included. This will mainly consist of statistical data that will ultimately reveal how the coronavirus has negatively impacted the health of United States citizens over the past year. In addition, policies and regulations that the United States has implemented since the start of the pandemic will be considered. This section will include how the coronavirus related policies or implemented policies and regulations have impacted the United States economy. The evaluation of this issue will include diving into how implemented regulations and the fluctuation of coronavirus cases have influenced United States businesses. After this, business data and financials will be used to analyze how the coronavirus has impacted different sectors of the United States economy. Finally, we will dive into the opinions of epidemiologists and economists to determine what some effective strategies are moving forward with the disease. These expert opinions will allow for insight to be gathered regarding the original research question, as valuable ideas on how to approach the pandemic going forward will be provided by credible individuals.

Following the exploration of these three areas through a literature review, an examination of my research methodology will be displayed in order to further comprehend the original

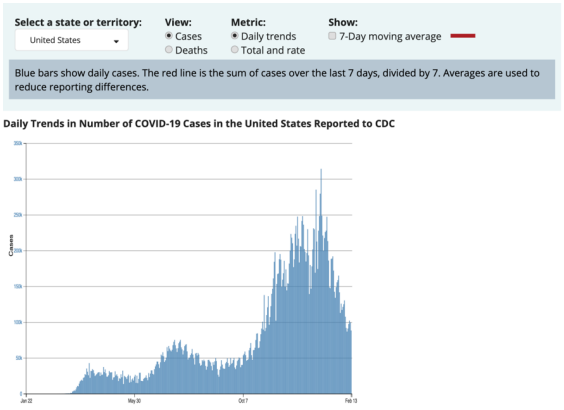
research question in an efficient manner. The type of research methodologies that I have selected include a survey and an analysis of raw data. Statistical data will be utilized to identify which policies and regulations have led to increases or decreases of coronavirus cases. The survey will be distributed to college students, as this group has felt both educational and work related effects of the coronavirus, and the opinions of this group are certainly relevant. This survey will primarily attempt to collect the opinions of this group regarding how the United States should move forward with restrictions to combat the coronavirus while being able to live a chunk of normal life.

HEALTH CONSEQUENCES OF COVID-19

The coronavirus has been declared as a "global health emergency", and the risk of spread has been classified as being "very high" (Schumaker, 2020). The United States has attempted to mitigate the number of coronavirus cases since the pandemic was established, but inevitably there have been health issues due to the coronavirus that have impacted many citizens across the country. Cases have spiked at times, and cases have plateaued at times. The disease continues to linger throughout the country, and solutions are still being sought after. Although vaccines to combat the coronavirus are being produced by multiple pharmaceutical corporations, a long-term solution seems distant. However, many maintain hope that, in the near future, the pandemic can be mitigated to a point where a large chunk of normal life can resume.

To establish a clear understanding of the coronavirus in the United States, a timeline of a few events related to the coronavirus in the country should be examined. According to ABC News, the first confirmed coronavirus case in the United States occurred on January 21, 2020. This was revealed when a man from Washington state was diagnosed with novel coronavirus after returning from a trip to Wuhan, China. Soon after this revelation, the World Health Organization declared a global health emergency as previously mentioned. This declaration on January 30, 2020 was only the sixth time in history that the World Health Organization had declared a "public health emergency of international concern" (Schumaker, 2020). A little over a month after the first confirmed coronavirus case was established in the United States, the first death due to the coronavirus was reported in the United States. This occurred on February 29, 2020. However, it was later confirmed that two deaths on February 26, 2020 were due to the coronavirus, and after this another death was revealed to be caused by the coronavirus. This particular death took place on February 6, 2020. Following these events, former president Donald Trump declared a national emergency on March 13, 2020. In the following days, the CDC warned against large gatherings, and the coronavirus became present in all 50 states. By March 26th, 2020, the United States led the world in coronavirus cases. The amount of coronavirus cases and deaths due to the coronavirus obviously vary by state, and later we will take a look at which states have been able to somewhat mitigate the disease compared to others. Later in this project we will also dive into the policies and regulations that these states have implemented and how affective they have been.

Now that a timeline of a few events related to the coronavirus in the United States has been established, let us take a look at how the coronavirus has been trending in the United States. As previously mentioned, the virus first entered the United States on January 21, 2020.



https://covid.cdc.gov/covid-data-tracker/#trends_dailytrendscases

Figure 1 – COVID-19 daily trend of cases

As seen in **Figure 1**, the daily trends in the number of coronavirus cases clearly displays drastic fluctuations over the past year. Although the first coronavirus case in the United States was confirmed to be in January of 2020, increases in the number of new coronavirus cases each day in the United States start to become evident towards the end of March, 2020. This is primarily due to the fact that federal health officials did not receive approval to utilize rapid testing until March 27, 2020. After the federal health officials received the green light for this testing, the number of new coronavirus cases per day began to increase. On July 24, 2020, 75,122 new coronavirus had been detected. This was the largest increase in the number of new cases for a day until the beginning of November. On November 1, 2020, 137,645 new coronavirus cases had been revealed. After this the number of new coronavirus cases each day began to primarily increase rapidly. The daily number of new coronavirus cases detected peaked at 314,093 on January 8, 2021. This increase in new cases per day was obviously very concerning, but there was a reason why the number of cases per day increased. When the virus was realized to be a serious issue towards the beginning of 2020, lockdowns were implemented across the country. Later in 2020, restrictions started to become loosened, allowing for the disease to become more easily spread. The lockdowns and restrictions will be discussed in further detail later in this project. However, since January 8, 2021, new cases per day have primarily decreased. On February 13, 2021, the number of new coronavirus cases were 88,193. This is clearly a great sign and shows that the coronavirus may be getting under control. There is also a reason for this rapid decrease. As previously mentioned, vaccines are being produced in order to fight the coronavirus, and this will be discussed in further detail later in this section.

Another important aspect of the coronavirus is what the symptoms are and how contagious it is. These are important aspects to look into regarding any disease, and the magnitude of the coronavirus makes these details even more essential to look into during this global pandemic. Similar to influenza (the flu), the coronavirus causes symptoms of a fever, cough, and nausea. Although the two illnesses cause similar symptoms, the symptoms of the coronavirus are more extreme. Another difference between the diseases is that the coronavirus has proven to be more contagious than the flu. Even with the implementation of regulations regarding mask wearing and distancing (which we will discuss in further detail later), the coronavirus continues to be more contagious than the flu. Why is this the case? This is because small particles of the coronavirus "may linger in the air longer than the flu" (Henry Ford Health

System Staff, 2020). When one breathes, talks, coughs, or sneezes, respiratory droplets are released, and this can spread easily from person to person. This is how the coronavirus spreads so easily. Airborne transmission is made possible by these droplets lingering in the air for minutes to hours. According to Dr. Abreu Lanfranco, "You could unknowingly be exposed to COVID-19 and contract the virus – even if the person who left those COVID-19 particles in the air is out of sight" (Henry Ford, 2020). In addition, another key difference between the coronavirus and the flu is that symptoms are not revealed as quickly with the coronavirus. This means that the incubation period upon contraction of the coronavirus needs to be longer than the incubation period for the flu. The average incubation period for the flu is up to 4 days while the average incubation period for the coronavirus is up to 14 days. Because the symptoms of the coronavirus can be slowly revealed, one could very likely contract and spread the disease without even knowing it, as Dr. Lanfranco mentioned. While symptoms are developing, it is very possible that one could unknowingly contract and spread the illness. This is an extremely concerning characteristic of the deadly coronavirus.

Now that the daily trends of new cases and characteristics of the coronavirus have been established, let us dive into statistics regarding the deaths and hospitalizations caused by COVID-19. Inevitably, a disease that is this hazardous and contagious will result in many deaths. According to data from the CDC, there have been 487,862 total deaths caused by the coronavirus in the United States as of February 17, 2021. This number of total deaths is out of the 27,658,361 cases that have been confirmed in the United States. Per 100,000 people in the United States, there have been 146 deaths. Between February 10 and February 17 of 2021, there have been 20,001 deaths cause by the coronavirus in the United States. It has been concluded by the CDC that citizens with underlying medical conditions are more severely impacted by the coronavirus, and it is known that people in older age groups are more likely to die from this disease than younger people. As seen in **Figure 2**, 95.5% of the deaths related to the coronavirus in the United States are linked to people aged 50 or older. A basic concept that is prominent in economics is externalities, and regulations have been implemented in order to protect those at risk (people with underlying medical conditions and older people) from contracting the coronavirus. We will discuss regulations and the economy more extensively in later sections, but for now, it is important to note that regulations need to be put in place in order to eliminate a negative externality, one that is younger people living without restrictions, thus likely harming older people and people with underlying medical conditions. This would cause those at risk to feel more unsafe, thus impacting their freedoms and hurting the country's economy due to less spending from these more at-risk citizens. The daily trends in the number of COVID-19 deaths in the United States reported to the CDC reveal similar fluctuations to the daily trend in new COVID-19 cases in the country. Although there were 5,520 newly reported deaths due to the coronavirus on February 12, 2021, the daily number of new deaths has decreased since then. This is evident when looking at **Figure 3**. On February 17, this number was 2,601. This is obviously a large step in the right direction. Regarding new hospital admissions due to the coronavirus, there have been a total of 1,730,332 new admissions between August 1, 2020 and February 16, 2021. Although this number is concerningly high, new hospital admissions due to the coronavirus are actually decreasing. The national peak of new hospital admissions in a single day was 18,081 on January 5, 2021. This dropped to a single day number of 8,957 on February 9, 2021. This was a 50% decrease, and the number of daily admissions fell by approximately 14% between February 9 and February 17 (CDC 2021). This was a clear sign that mitigation of the coronavirus was moving in the right direction.

There have been many attempts to reduce the severity of the coronavirus, and as of recently there has been some success. As mentioned previously, the long-term solution still seems distant, but progress is slowly being made. On December 14, 2020, the U.S. COVID-19 Vaccination Program began (CDC 2021). Pharmaceutical corporations, such as Pfizer, Moderna and Johnson & Johnson, have been testing and developing potential vaccines to fight the coronavirus. Individuals are able to receive multiple doses of vaccines in order to decrease the chances of contracting and spreading the virus. The distribution of the vaccines is starting to increase, and more and more individuals are choosing to utilize this strategy. As of February 21, 2021, there has been a total of 75,204,965 doses delivered in the United States. Of the total doses delivered in the United States, 63,090,634 doses have been administered. The total amount of individuals in the United States that have received at least one dose of a vaccine is 43,628,092, and 18,865,319 individuals have received at least two doses (CDC 2021). As seen in **Figure 4**, the vaccines created by Pfizer and Moderna are by far the most popular, as 32,232,422 of the doses administered in the United States are from Pfizer and 30,747,615 are from Moderna. In the early stages after vaccination, the vaccines produced by Pfizer and Moderna have shown great effectiveness. After two doses of the Pfizer vaccine, there is 95% efficacy at preventing symptomatic COVID-19 infection. Moderna's vaccine compares similarly with a 94.1% efficacy (Branswell 2021). Obviously, these vaccines show great promise moving forward. However, as previously mentioned, much more needs to be accomplished in order to fully control the coronavirus.

REGULATIONS AND ECONOMIC IMPACTS OF COVID-19

It is no secret that a sudden, unexpected global pandemic is bound to produce negative impacts, and the economic impacts of a pandemic is a popular topic of discussion because it is incredibly relevant to the United States as a whole. Safety is obviously a huge priority during a global pandemic, and the United States has implemented numerous restrictions to ensure safety for its citizens. States all across the nation have implemented different levels of restriction, with some being more restrictive and some being looser on rules. A few of these restrictions include rules for wearing masks, stay at home orders, social distancing, and limited business. Although these regulations were set in order to ensure safety, these restrictions have resulted in some consequences regarding the economy.

When the coronavirus entered the United States early in 2020, the country soon realized the magnitude of the issue and acted quickly to prevent further spreading of the disease. A lockdown rapidly ensued, and a national emergency was declared. As previously mentioned, states across the United States enacted various restrictions when the coronavirus was initially claimed to be a serious problem. Initially, most states in the country implemented major restrictions, including restrictions that involved requiring businesses, such as restaurants, to deny customers from entering the inside of their buildings. A prime example of this comes from my own experience when I desired to get a haircut. Due to the coronavirus, barber shops were not open, and I was unable to receive a haircut for multiple months when the disease infiltrated the United States. Since the beginning of the pandemic in March of 2020, however, restrictions have been loosened as more information has been gathered regarding the coronavirus. Even though restrictions have since been loosened, many restrictions still remain intact.

Whereas the beginning of the coronavirus warranted extreme restrictions in the United States, the past year has supplied information that has led to modifications of regulations that

states across the country feel are appropriate to maintain safety. Of the restrictions that have previously been mentioned, arguably the three most prominent are business restrictions, mask requirements, and stay-at-home orders. Due to the vaccines and various information gathered about the virus, most states have become more comfortable loosening restrictions. As seen in **Figure 5**, there are no states in the United States that have mostly closed businesses. Most of the states (42) have mostly open businesses. However, 8 states, including California, are mixed when it comes to open and closed businesses. Regarding mask requirements, **Figure 6** clearly displays that 12 U.S. states have no restrictions, while 32 states have implemented mandatory mask wearing restrictions. In 6 states, masks are sometimes required. Finally, stay-at-home orders have decreased since the beginning of the global pandemic. Of the 50 states, 43 have no stay-at-home orders. There are 6 states that are advisory, and only one state, Virginia, has an order or curfew. This is displayed by **Figure 7** (New York Times 2021).

While looking at these visuals, it is especially important to consider the states that possess the highest populations. This is because states with the highest populations have the largest impact on the economy. For instance, California is a rather restrictive state, with mixed functionality of businesses, mandatory mask requirements, and advisory when it comes to stay-at-home orders. According to the New York Times, Governor Gavin Newsom of California declared that, in any region where available beds in intensive care units dropped below 15%, a stay-at-home order would be instituted. In addition, through the holiday season and January, the majority of California was under lockdown. This was eventually overturned on January 25, 2021. On the opposite end of the spectrum, New York and Texas have mostly open businesses and no restrictions regarding stay-at-home orders. However, these states do have mandatory mask restrictions. Andrew Cuomo, Governor of New York, announced in February that a number of long-closed businesses would be opening back up. This included major stadiums and arenas, outdoor amusement parks, New York City movie theaters, and more. New York City began resuming indoor dining on February 12, 2021, and its capacity increased to 35%. The Governor of Texas, Greg Abbott, lifted restrictions before most Governors, but has closed some businesses in the event of increased cases. Florida, one of the most populated states, has mostly open businesses, no mask restrictions, and no stay-at-home restrictions. Ron DeSantis, Governor of Florida, has made it clear that he wants businesses such as bars and restaurants to remain open and thrive (New York Times 2021). As previously mentioned, each U.S. state has approached its coronavirus restrictions in its own way, and California, New York, Texas, and Florida are obviously a few prominent states to point out. However, the approaches of every other state is important, as well. Based on the visuals of recent restrictions and strategies that some states are implementing, it is clear that restrictions are starting to loosen across the country. While restrictions are beginning to loosen, the remaining restrictions, along with the more extreme restrictions over the past year, have had an impact on the United States economy.

Pointed out earlier in this project, businesses have been closed, and stay-at-home orders have been utilized across the country over the past year. Obviously, this harms the economy because jobs have been lost and citizens have been unable to go out and spend money as much. The United States economy needs consumer spending in order to succeed. Consumer spending allows companies to profit, and this in turn allows the economy as a whole to become prosperous. However, the pandemic has hindered the ability of consumers to spend, hence greatly impacting the economy in a negative manner. The economic impacts of the pandemic are astounding. The Great Depression is the last time the United States saw numbers similar to the numbers in October of 2020, as the closing of a significant portion of the U.S. economy had

resulted in a 31.4% decrease in real GDP growth. Unemployment also increased to a shocking 14.7% as a result of the pandemic, its highest rate in the post WWII era. Before the pandemic began to impact our country, the United States economy was flourishing. Inflation was below 2.0%, the Fed's target, and unemployment had been at a 50-year low. In October of 2020, there were 6.8 million more unemployed workers than in February of 2020 (Patton 2020). With this many more workers out of the workforce, it is not likely for economic flourishment. According to Forbes, "many companies have closed forever, leaving its employees to find other job opportunities." This is one of the huge consequences of the coronavirus. Jobs have been greatly impacted, and it is as simple as that. Businesses that had temporarily closed by April 2020 had reached a whopping 43%, and almost all of these closings were due to COVID-19 (Amadeo 2021). The Proceedings of the National Academy of Sciences of the United States of American conducted very informative research that revealed an estimated 75% of all businesses surveyed would not be able to survive more than two months with the amount of cash that they currently had. This epitomizes the financial burden that the coronavirus placed on many, many businesses. Another shocking revelation is that, by September 2020, commercial Chapter 11 bankruptcies were up 78% since September 2019 (Amadeo 2021).

It has been explained that many jobs have been lost and businesses have closed due to the coronavirus. So what happened to employees who retained their jobs with their surviving companies? For many of these employees, their jobs shifted from their workplace to their home. Various nationwide surveys were conducted by Stanford's economist Nicholas Bloom, and he found that 42% of U.S. employees had shifted to working from home full time. Although this was a large percentage of the labor force, 26% of workers were able to work from essential businesses, including grocery stores, health care, and auto repair facilities. Unfortunately, lockdowns and layoffs resulted in 33% of the labor force not working at all (Amadeo 2021). The large shift from employees working in the workplace to their homes has provided some challenges that make it difficult to conduct work efficiently. According to Bloom, bedrooms or shared rooms were forced to be used by more than half of employees working from home, and more than a third of these employees have poor internet connection that hinders their ability to participate productively in video conference calls. Not being comfortable in a work environment can lead to poor work, and this is made even worse with poor internet connection. Due to these challenges, companies can face even more hardship, and obviously this is all because of the coronavirus pandemic.

Additionally, financial markets have been fluctuating over the past year due to lingering uncertainty regarding the coronavirus. According to Forbes, stocks were 87.5% overvalued by September 2, 2020. This is the largest percentage of overvalued stocks ever, surpassing the Tech Bubble in March of 2000. When the economy is weak, it is not unlikely for stocks to rise, and there are two explanations for this. The first explanation is that investors desire to buy stocks when valuations are low. The second reason is what is relevant to the circumstances regarding the coronavirus. This reason is momentum. This is why stocks have risen even though there have been a lack of earnings and a weak consumer. Excessive momentum can lead to a bubble and create higher valuations than normal. Momentum can keep up for years and years, but it can lead to a very bad ending (Patton 2020).

IMPACT ON DIFFERENT INDUSTRIES

Now, what sectors of the economy have felt the biggest impact from the coronavirus? Several sectors have obviously been extremely influenced by the pandemic. In particular, retail, entertainment, bars, and restaurants have been hit hard (Amadeo 2021). This can be attributed to the fact that these businesses rely on an on-site location in order to conduct business. The road to recovery for these industries seems long and difficult, as the issues surrounding COVID-19 have remained for almost a year.

Regarding retail, it was reported that a record of 12,200 stores were planning to shutdown. This was reported by CoStar Group. On January 13, 2021, First Insight surveyed 1,000 consumers and found that 60% of shoppers may stay away from stores depending on COVID-19 spikes. The respondents are becoming increasingly uncomfortable with testing beauty products (71% feel unsafe as compared to 67% in November 2020), trying on products (62% feel unsafe compared to 55% in November 2020), and working with a sales associate (59% feel unsafe compared to 51% in November 2020) (Digital Commerce 360 2021). This is clearly troublesome for the retail sector of the economy.

Regarding entertainment in the United States, movie theaters, concerts, and sports are major industries that have been hit hard by the coronavirus. In late March of 2020, indoor cinemas closed along with many other businesses. According to CNBC, some state governments began to allow indoor theaters to reopen to the public with limited capacity in May of 2020. Michael Pachter, an analyst at Wedbush, claimed that the theater industry is "not going to recover fully until consumers are confident that they won't die if they go to the movie" (Whitten 2020). Major films that were set to release in 2020 have been shifted to a 2021 release. This includes the marvel movie "Black Widow", which was set to release in November 2020, but has been moved to a release in May 2021. Doug Stone, president of Box Office Analyst, stated late in 2020 that there was nothing likely to product significant revenue until later in the year, and another shut down with layoffs may recur. Over the span of a nine month period in 2020, movie theater stocks were extremely damaged. At one point, AMC's stock was down 32%, Cinemark had dropped 70%, Marcus Theaters had decreased 75%, and IMAX had tumbled 40%. This resulted in nearly $2.7 billion in market value wiped out for these stocks due to the sudden pandemic (Whitten 2020).

The music industry also experienced a shut down early on when the pandemic hit the United States. This industry was one of the first to be forced to shut down, and it will most likely be one of the last to fully get back to business (Blistein and Millman 2020). During this shut down of live music and concerts, jobs have been lost by promoters and booking agents, and musicians have lost one of their most important streams of income. According to Pollstar, the global concert business lost $9.7 billion in ticket sales alone. Another estimated $30 billion was lost in sponsorships, concessions, merchandise, and others (Blistein and Millman 2020). Although these numbers are based on a global scale, this demonstrates the impact that the coronavirus has had on the music industry, and the United States is certainly in the mix when it comes to these losses of revenue.

When it comes to the sports industry during the coronavirus pandemic, financial burdens have also occurred. In mid March 2020 when sporting events were first getting cancelled, it was estimated that 1.3 million sports jobs were impacted (Burrow 2020). This estimation is the result of research conducted by Emsi. Displayed in **Figure 8** is a breakdown of the sports jobs that were at risk. When the coronavirus first hit the United States, the NBA regular season was close to ending, and the playoffs were near. Obviously, the NBA needed to adapt in order to ensure safety for players and fans moving forward. After a hiatus from playing games, the NBA decided

to resume the season in a "bubble" in Orlando, Florida. This bubble consisted of the players, coaching staff, and virtual fans projected in the arenas. Due to the lack of fans and adjusted approach to the season, the NBA lost 10% of its revenue, which was reported by ESPN. The MLB was also forced to think on their feet, and they were forced to shorten their season after the pandemic interrupted spring training. This resulted in the MLB taking on $8.3 billion in debt, and the league will lose between $2.8 and $3 billion. MLB commissioner Rob Manfred stated, "The economic losses [this season] have been devastating for the industry" (Blistein and Millman 2020). The MLB also implemented restrictions that resulted in no fans. The NFL had some teams that allowed limited capacity, while others did not allow fans at all. According to CBS News, the NFL lost almost $4 billion while playing through the coronavirus pandemic. Marc Ganis, a confidant of many NFL owners, estimated this number and stated, "It was a huge financial hit for us this year, no question about it" (CBS News 2021). This was the case for all of the major sports when attempting to adapt to the pandemic.

Another prominent industry that experienced hardship during the pandemic is that of restaurants and bars. After surveying 6,000 restaurant operators, the National Restaurant Association concluded that 87% of full-service restaurants reported an average 36% drop in sales and that 10,000 restaurants closed in the United States in a three month span (Richter 2020). Shown in **Figure 9**, food services and drinking places lost an appalling $130 billion in sales between March and October 2020 compared to the previous year. In addition, 2.1 million jobs were lost in the industry between February and November 2020. Finally, 110,000 restaurants were closed either permanently or long-term as of December 2020 (Richter 2020). This numbers were produced by the National Restaurant Association, the U.S. Bureau of Labor Statistics, and the U.S. Census Bureau.

Obviously, these financial downfalls are horrifying. This pandemic has hit the United States economy hard, and restrictions have prevented United States citizens from enjoying important events and large chunks of normal life. People want to be able to go to concerts, sporting events, restaurants, bars, and stores. Restrictions have caused major industries to lose tons of money, and United States citizens have been unable to experience joyful events over the past year. However, many believe that these measures needed to be taken in order to prevent the spread of the disease. So, this begs one question: How can we ensure safety while protecting the economy and being able to live a normal chunk of life?

EXPERT OPINIONS

Now that a background on the coronavirus and its impact on the United States has been established, it is important to dive into the outlooks of epidemiologists and economists regarding strategies. In order to better answer and understand the original research question of this project, the thoughts and opinions of these experts need to be examined, for viewpoints of credible sources can provide great value to research. When it comes to the coronavirus, the ideas of economists and epidemiologists are especially important. Will experts recommend more restrictions or less restrictions? Is the current United States approach the correct one?

During the initial eruption of coronavirus cases in the United States, many economists advocated for very aggressive lockdowns. According to these economists, aggressive lockdowns would be the most beneficial solution for the long-run, even though they knew that they economy would suffer short-term damage (Paine 2020). In September 2020, about six months after the coronavirus first hit the United States, FiveThirtyEight conducted a poll of 32

quantitative macroeconomists to gather their opinions regarding the present and future of the United States economy. In addition, FiveThirtyEight also asked whether these experts believed the lockdowns at the beginning of the pandemic were too aggressive or not aggressive enough. Of the 32 respondents, 74% claimed that more aggressive lockdowns at the beginning of the crisis would have led to a better economic position now. The most popular reason given for this is that control over the virus early on would allow for a smoother and more comprehensive return to economic activity later on. Furthermore, Andrew Patton, a professor of economics and finance at Duke University, explained that "more aggressive lockdowns would have gotten the country in a better position (health wise)" heading into the later season. Patton also mentioned that more aggressive lockdowns would have made it clear to United States citizens that the magnitude of the coronavirus was large, and the matter needed to be taken very seriously. It was emphasized by Patton that it does not work when some areas are locked down while other areas implement looser restrictions. Of the economists that were behind the early aggressive lockdown approach, many cited Japan and multiple European countries to illustrate their viewpoint. These countries employed early lockdowns in order to reduce the virus to low levels so that a quicker recovery could ensue (Paine 2020).

Although 74% of the respondents to the FiveThirtyEight poll preferred more aggressive lockdowns, 26% thought the lockdowns should have been less aggressive. The main reasons given by these respondents for less aggressive lockdowns include that a targeted approach would have done better to protect at-risk populations and prevent superspreading events, while at the same time allowing for more activity to take place. These respondents also cited that the lockdowns just did not matter much and most of the activity reduction was due to self-regulation as opposed to government intervention. Deborah Lucas, a professor of finance at the MIT Sloan School of Management, believed that "the positive effect of more commerce on employment probably would have outweighed the higher infection rates in most places", and she also believed that "the shutdowns were not very effective" (Paine 2020). Along the same lines, Christiane Baumeister, a professor of economics at the University of Notre Dame, claimed that she chose the less aggressive option because self-regulation "is not something that can actually be controlled by the authorities" (Paine 2020).

After the respondents' responses were revealed regarding early lockdown strategies, the respondents were asked which activities should be shut down if they also wanted to minimize economic damage in the event that COVID-19 cases spike again.

What should be shut down to minimize economic damage?

The activities and places that should be shut down first to curtail economic damage if there's a spike in COVID-19 cases, according to economists

ACTIVITY/PLACE	1ST PLACE VOTES*	AVG. PRIORITY RANK
Indoor dining	13	2.3
Gyms	5	3.5
In-person political campaigning	6	4.4
Arts & cultural institutions (museums, theaters)	2	4.5
Universities	1	5.0
Retail stores	0	6.0
Interstate travel	2	7.1
K-12 schools	1	7.1
Day cares	0	8.0
Outdoor dining	0	8.2
Outdoor recreation	0	9.9

*No. of respondents who listed this as the top priority, out of 30 who completed the question.

SOURCE: FIVETHIRTYEIGHT/IGM COVID-19 ECONOMIC SURVEY

https://fivethirtyeight.com/features/experts-think-the-economy-would-be-stronger-if-covid-19-lockdowns-had-been-more-aggressive/

Figure 10 – Activities that economists believe should be shut down in order

Figure 10 reveals how the respondents answered the question. An aspect of **Figure 10** that is intriguing is that fact that K-12 schools and outdoor activities are near/at the bottom of the list. Essentially, this infers that the economists believe that these activities help power the economy more than the other activities, and they are simply more important to keep open. Respondents were then asked which developments would cause economists' GDP growth predictions to become better or worse in 2021. These results can be seen in **Figure 11**. Again, it is very evident that the economists believe that the schooling system is an essential driver of the economy. However, the number one scenario that the economists believed would help the economy in 2021 the most was the approval of a vaccine by Election Day, and this has happened. Obviously, this is a great sign of progress moving forward. Interestingly, the economists' answers revealed that they believed that the Democrats control of Presidency and Congress would result in a better economy in 2021, and they believed that a Trump victory would result in a worse economy. This is most likely due to the fact that the Democrats have been more willing to pass government spending bills. Jonathan Wright, an economist at Johns Hopkins University, stated, "I think that failing to pass fiscal stimulus is the biggest downside risk" (Paine 2020). Clearly government spending is necessary for economic recovery in 2021. Moving forward, economists have made it obvious that the schooling system needs to open, and government spending needs to occur. Also, outdoor activities should proceed. These events taking place will help protect the economy.

Although some progress has been made by collecting information and formulating vaccines, experts are predicting that the coronavirus may be with us forever. However, they do not believe that it will always be a deadly plague (Mitropoulos 2021). Dr. John Brownstein, chief innovation officer at Boston Children's Hospital, claimed, "Eradication of this new coronavirus is basically impossible" (Mitropoulos 2021). Many experts believe that the coronavirus could very possibly become a seasonal illness where exposure will allow for some immunity to build while developed vaccines and drugs also will help for mitigation. Dr. Brownstein also mentioned that the hope for mitigating the virus will stem from natural immunity and immunizations. If there is enough natural immunity and immunizations, the disease would just become part of the natural cycle of cold season with similar impact to the flu disease. "We may have to think about rewiring out brains around how we view this virus," Brownstein stated. Sarah Cobey, an epidemiologist and evolutionary biologist at the University of Chicago, stated, "I think it will become seasonal. All acute respiratory viral infections are" (Mitropoulos 2021). The coronavirus is expected to stay for good, and that is something that needs to be acknowledged and accounted for. These experts believe that the disease needs to be mitigated to the point where it is similar or less severe than the flu.

By the end of 2021, Dr. Anthony Fauci believes that the United States will be close to encountering some level of normality. Dr. Fauci is the nation's leading infectious disease expert. However, the expert believes this is dependent on enough people receiving the vaccination along with following safety protocols, such as mask wearing and social distancing. According to Dr. Fauci, herd immunity is possible if between 75% and 80-85% of the population receives a vaccination. It is predicted by Dr. Fauci and other experts that the "overwhelming majority of the population" will be able to get vaccinated by the second quarter of 2021. Dr. Fauci also mentioned that masks and physical separation in congregated settings will likely be needed until

late fall or early winter of 2021. Antonio Crespo, infections diseases physician and medical director at Orlando Health, stated, “hopefully by the second part of 2021, we can start seeing a significant decline [in infections], and hopefully a control of this disease” (Stieg 2021).

Based on the opinions and outlooks of the experts discussed, multiple points and key takeaways can be highlighted. Some of the experts possess conflicting viewpoints, such as the effectiveness of lockdowns. However, most of the experts discussed believe that the coronavirus can be mitigated by following safety protocols and receiving a vaccine. While these actions need to be taken to mitigate the disease, economists did emphasize which activities should remain open despite the presence of the coronavirus. Safety can be maintained while important driving forces of the economy can remain open in a cautious manner. Diving into the viewpoints of these experts also made it clear that large chunks of normal life can likely resume very quickly, as long as people continue to follow safety protocols while vaccines continue to be distributed and received by citizens. While vaccines continue to progress and distribution continues to increase, the virus could be mitigated enough to allow for restrictions to be loosened soon, and this would lead to an opportunity for the economy to pick back up.

RESEARCH METHODOLOGY

I have chosen to conduct a survey for my research methodology. I believe that a survey related to COVID-19 allows for the original research question to be further explained and understood, and this will allow us to formulate more ideas for strategies going forward as a country. In addition to this, I gathered and compared data regarding policies implemented by specific countries to display how the policies have impacted their total coronavirus cases over time. This analysis of total cases in the countries will implicate how impactful some policies are, and it will be determined if these policies are really worth implementing in order to ensure safety and mitigate spreading of the disease.

For my survey, I have decided to distribute the poll specifically to college students. I chose this method because I believe the opinions of college students are extremely valid and relevant to the topic at hand. College students experience many aspects of life, including school, work, and social events. The opinions of these students will provide a great outlook of young adult views about the coronavirus and how it has impacted them. My hope for the survey is that the impacts of the coronavirus on many can be further explained, and I hope to gather opinions from this next generation regarding approaches to the coronavirus. The goal of this survey is to help answer the original research question, and the opinions of college students should be taken into account when considering optimal strategies for the United States moving forward.

The survey included a link that was distributed through email and text, and the google form from which the survey was created allowed for each participant to remain anonymous. Ideally, participants’ anonymity led to respondents feeling more comfortable with answering the questions, and thus hopefully led to more honesty. To begin my survey, a couple of questions were asked to gather information regarding basic demographics. After this, the participants were asked if COVID-19 had negatively impacted their learning experience in college. Later in the survey, respondents were also asked about the negative impacts that COVID-19 has had on several other aspects of life, such as family, finances, social life, work life, mental health, etc. The purpose of these questions was to further demonstrate the impacts that the coronavirus has had on many. Also included in the survey was a series of questions regarding how restrictions related to many large chunks of life should be handled. Ultimately, I am wanting my survey to

provide insights revolving around five essential questions: “What has the spread of the virus been like for the typical college student”, “How has COVID-19 impacted work life for college students and people they know”, “How has COVID-19 impacted finances for college students”, “Has COVID-19 negatively impacted large chunks of life for college students”, and “What restrictions do college students believe should be in place”.

I have also gathered and presented raw data as part of my research methodology. Data was gathered regarding total coronavirus cases over time in multiple countries, and this was compared to how aggressive their policies have been over the same time period to determine how impactful policies implemented by these countries have been when it comes to mitigating the virus. The purpose of this was to provide insights as to whether or not the aggressiveness of these countries has been successful. I wanted to determine if these policies have really been keeping people safe and preventing the spread of the coronavirus, and I wanted to find out which countries have been handling the coronavirus in the most efficient manner.

Overall, I am hopeful that the research methods that I have chosen have provided valuable insight that contribute greatly to answering the original research question, and I believe that important information has been gathered that is relevant and essential when it comes to the topic of the coronavirus.

FINDINGS

The survey that I conducted for this project was filled out or partially completed by 123 college students. As seen in **Figure 12,** there was a good variety of year classification represented in this research. Of the 123 participants, 38 (30.9%) are freshmen, 27 (22%) are sophomores, 20 (16.3%) are juniors, and 38 (30.9%) are seniors. Displayed in **Figure 13**, 83 (67.5%) of the participants are male, 39 (31.7%) are female, and 1 (0.8%) is gender fluid.

Data Category 1: What has the spread of the virus been like for the typical college student?

The purpose of answering this question through the research conducted by my survey is to gain a better understanding of a few things: Has the coronavirus been spreading prominently between college students? Do college students know someone who has contracted the disease? Have they been participating in safety guidelines? Has the spread of the virus impacted their mental health? These questions were spread out throughout the survey, and I would like to address this first data category by discussing the results of each of these questions. The results to these questions will allow us to further understand the impacts of COVID-19, and its influence on young adults will become more apparent.

Early on in my survey, I asked the question “Have you contracted COVID-19?”. Of the 123 responses, I found that 46 (37.4%) of the students had in fact contracted the coronavirus, and 77 (62.6%) of the respondents had not contracted the disease. This is evident is **Figure 14**. This outcome very much surprised me, as I would have guessed that a larger portion of the respondents had contracted the coronavirus at some point. Still, though, 37.4% of the students had been infected by COVID-19, and this is definitely a significant chunk. This led me to believe that the virus was still spreading somewhat frequently among college students. My guess as to why this number was large is because college students strongly desire to gather for social events, and it is difficult to monitor and prevent everyone from doing this. More caution needs to be taken in this regard, and the distribution of the newly developed vaccines to college students can definitely lower this number. Later on in the survey, I wanted to find out if the students know

someone else who had contracted the virus. I feel that the question displayed in **Figure 17** provides valuable insight as to just how contagious this disease is. As seen in the figure, all of the 123 respondents know someone who had contracted the coronavirus. I find this unsurprising, as everyone I have talked to in my personal life has known someone else who had been infected by the disease, and I expected this to also be the case with the participants of my survey. The fact that every single one of the respondents know someone who had contracted the coronavirus further demonstrates the magnitude of the disease. The coronavirus has been spreading like wildfire, and it is evident that college students have suffered in the sense that at least one person they know had contracted the virus. This impacts college students because it leads to them isolating from the person they know for an extended period, and this can be devastating. Also, as previously mentioned in this project, symptoms of the coronavirus can be revealed slowly, and if each college student knows someone who had been infected by the virus, it is entirely possible that the students could have contracted the virus without even knowing it. This is obviously very concerning.

Now that the spreading of the coronavirus regarding college students and people they know have been analyzed, it is important to discuss whether or not college students have been participating in essential guidelines in order to maintain safety and mitigate the spread of the disease. I asked the participants to indicate which safety guidelines they have been participating in during the pandemic, with the options being "wearing a mask", "social distancing", "sanitizing hands", and "none". **Figure 16** reveals the results of the question. It can be seen that of the 123 respondents, 122 (99.2%) have been wearing a mask, 89 (72.4%) have been social distancing, and 101 (82.1%) have been sanitizing their hands. Only 1 respondent has not been participating in any of these guidelines. The fact that all but one respondent have been wearing a mask does not surprise me, as this has been a requirement. However, it is great to see that most students have been social distancing and sanitizing their hands, as these are not necessarily requirements, but recommendations. These results make it clear that most college students are seriously following safety guidelines that had been recommended or implemented. This very well may be the reason that the majority of college students in this survey had not contracted the disease. Although college students are most likely attempting to gather for events, it appears that they may be gathering in a safe way, and this is a great step in the right direction. Still, it is essential for ALL students to follow these requirements and recommendations in order to maintain complete safety. Most people doing their part and putting in effort in attempting to mitigate the disease will only help going forward, and this can lead to the pandemic ending faster.

In addition to these questions, I also desired to learn how the pandemic has impacted the mental health of college students. Understandably, this may have been an uncomfortable question for the respondents to answer, as mental health is not an easy topic to discuss. However, I believe the results of the question provide valuable insight that further explain the damage of the coronavirus. Displayed in **Figure 15** are the results of this question. Of the 123 respondents, 93 (75.6%) confirmed that their mental health had been negatively impacted by the coronavirus. The other 30 participants (24.4%) confirmed that their mental health had not been negatively impacted by the coronavirus. The isolation and lack of normal life that has resulted from the coronavirus is most likely the reason for this impact on mental health. Again, these results further explain the damage created by the coronavirus. The pandemic has led to deteriorating mental health for many, and this makes ending the pandemic quickly that much more important to accomplish.

Ultimately, the results of these questions reveal that the spread of the coronavirus has greatly impacted college students. Many had contracted the disease, they all know someone who had contracted the disease, and mental health had been harmed due to this pandemic. However, as I previously stated, the fact that most of these college students had been participating in safety guidelines is a huge positive, and these actions can lead to a prevention of further damage caused by the coronavirus.

Data Category 2: How has COVID-19 impacted work life for college students and people they know?

Next, I wanted to figure out how work life had been impacted by the coronavirus for college students. As previously discussed in this project, many businesses have been suffering throughout the pandemic, and many have closed, leading to the loss of jobs for many. Again, I believe narrowing this down to college students is incredibly relevant, as many college students have jobs and are part of the workforce in the United States. The results that will be discussed in this data category will simply allow for us to further comprehend how the coronavirus has hindered the economy and impacted the lives of many.

To begin analyzing this, I asked respondents to indicate if the coronavirus had negatively impacted their work life. **Displayed in Figure 18**, it is evident that, of the 123 respondents, 74 (60.2%) confirmed that their work life had been negatively impacted by the coronavirus. It can be inferred from these results that 74 of the students that participated in this survey may have experienced job loss or perhaps less work shifts due to the coronavirus pandemic. After this, I asked participants to indicate if the coronavirus had positively impacted their work life. As seen in **Figure 19**, only 11 (9.2%) of the 119 respondents to this question indicated that the coronavirus had positively impacted their work life. It is clear that the negatively impacted outweigh the positively impacted by a significant amount.

Following these questions, I found it important to ask the participants whether or not they know someone who had lost their job due to COVID-19. **Figure 20** demonstrates that, of the 123 respondents, 84 (68.3%) know someone who had lost their job due to COVID-19. On the other side of this, 39 (31.7%) of the respondents do not know anyone who had lost their job due to COVID-19. Again, the negative outweighs the positive significantly here. Of this sample, most students know someone who had lost their job, and this is very concerning. To further expand on this, I asked the participants to indicate how many people they know who had lost their job due to the pandemic. Of the 84 respondents who know some that had lost their job due to COVID-19, 9 (7.3%) know one person who had lost their job, 20 (16.3%) know two people who had lost their jobs, 24 (19.5%) know three people who had lost their jobs, 11 (8.9%) know four people who had lost their jobs, 14 (11.4%) know five people who had lost their jobs, 2 (1.6%) know six people who had lost their jobs, 1 (0.8%) knows seven people who had lost their jobs, 1 (0.8%) knows nine people who had lost their jobs, and 2 (1.6%) know ten people who had lost their jobs. None of the respondents knew specifically eight people who had lost their jobs due to the pandemic. Of the 84 who know someone that had lost their job due to the disease, 75 (89.3%) know multiple people who had lost their jobs. These results can be referred to in **Figure 21**. The results of this question are astounding. The majority of these students know multiple people who had lost their jobs due to the pandemic, and that is frightening.

This data category allows for the work life of college students and people they know to be better understood. The results from the questions on my survey for this data category make it very clear that young adults are struggling with work because of the coronavirus, and this simply

hurts the economy and well-being of many. If businesses are closing and the next generation of adults are finding it difficult to locate work, the economy will reflect this and struggle. However, as I have mentioned, the distribution of vaccines, along with people continuing to follow safety guidelines, can rapidly turn this around.

Data Category 3: How has COVID-19 impacted finances for college students?

Now, this next data category goes hand in hand with Data Category 2. However, instead of work life, the analysis is being narrowed down further to finances of college students in specific. On my survey, I asked questions regarding income and spending ability of students during the pandemic in order to get a better sense of the financial implications that the coronavirus has had on young adults because many young adults already take on student debt in order to pay for college, and income for these individuals is extremely important.

The first question that should be analyzed for this data category is if the students generally feel that the coronavirus had negatively impacted their finances. In my survey, I asked participants to indicate if the disease had negatively impacted their finances, and the results are on par with what is expected. As seen in **Figure 18**, of the 123 respondents, 43 (35%) confirmed that COVID-19 had negatively impacted their finances. This is obviously a large portion of students who had suffered financial impacts of the pandemic. After this, I asked respondents to indicate if the coronavirus had positively impacted their finances. **Figure 19** shows the results of this. Of the 123 respondents, 15 (12.6%) confirmed that COVID-19 had positively impacted their finances. Again, the negative impacts on student finances from the pandemic are far more than the positive impacts.

After learning whether or not most students have experienced general financial trouble from the pandemic, I wanted to dig in specifically to the income of college students to find out how the pandemic had impacted their income and ability to earn money. I presented the following statement to the respondent: “COVID-19 has negatively impacted my income/ability to fully earn”. I asked the respondents to indicate whether they strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, or strongly agree with this statement. As seen in **Figure 22**, of the 123 respondents, 12 (9.8%) strongly disagreed, 19 (15.4%) somewhat disagreed, 36 (29.3%) neither agreed nor disagreed, 35 (28.5%) somewhat agreed, and 21 (17.1%) strongly agreed with the statement. So, it is confirmed that 56 (45.5%) of the students had experienced at least a somewhat negative impact regarding their income and ability to fully earn due to the pandemic. Following this, I wanted to get a feel for what this impact on their finances had meant in terms of the spending habits of the students. I presented the following statement to the students: “COVID-19 has negatively impacted my spending”. Again, I asked the respondents to indicate whether they strongly disagreed, somewhat disagreed, neither agreed nor disagreed, somewhat agreed, or strongly agreed with this statement. Displayed in **Figure 23** are the results of this. Of the 123 respondents, 6 (4.9%) strongly disagreed, 15 (12.2%) somewhat disagreed, 53 (43.1%) neither agreed nor disagreed, 31 (25.2%) somewhat agreed, and 18 (14.6%) strongly agreed. Unsurprisingly, a large chunk of the students verified that the pandemic had negatively impacted their spending abilities, as work life and finances had been impacted in general. The negative impact that the coronavirus has had on the work life and finances of students has clearly led to lack of spending for a lot of young adults. However, 74 (60.2%) of the respondents were neutral or disagreed with the statement, and this is a positive sign. It seems that, although a large portion of students had been negatively impacted regarding spending, there is also a large portion of students that possess spending habits that had not really been impacted

by the pandemic. As I have mentioned, spending is essential in order for the economy to flourish, and I am somewhat surprised that this many students had retained their normal spending habits throughout the pandemic.

Based on the results from this set of questions included in my survey, it can easily be concluded that the coronavirus has largely damaged the finances of college students. It is crucial that these young adults are able to earn and bring in some income so that they can be financially stable and have the ability to spend. This obviously would help the economy recover. In order for this to happen, I believe that businesses need to open up more. This would allow these students to capitalize on opportunities to work and earn money, and the businesses could still implement safety guidelines to the best of their abilities.

Data Category 4: Has COVID-19 negatively impacted large chunks of life for college students?

In order to further assess the magnitude of the coronavirus, I believe it is essential to find out just how impactful it has been regarding the huge portions of everyday life for college students. The disease has obviously created many obstacles for individuals, and I believe that it has seriously harmed the ability of college students to participate in some important events. In conducting research for this, I narrowed down my questions to a few specific aspects of life: Social life, ability to practice religion, ability to travel, and ability to exercise/participate in outdoor activities. In my personal experience, I know many people who had experienced a negative impact on these aspects of life due to the coronavirus, so I desired to ask about these specific aspects in my survey. Another reason why I chose to ask about these in specific is because these are incredibly large portions of life for many college students.

To begin, I wanted to get a feel for how college students had perceived the impact of the coronavirus on their social lives. I asked the respondents to indicate whether the coronavirus had negatively impacted their social life. The results are displayed in **Figure 18**. Of the 123 respondents, 119 (96.7%) indicated that the coronavirus had negatively impacted their social life. Social life is obviously an extremely important aspect of life, and one could argue that social life is far more prominent for college students than others. I can attest to these findings because I would say that the coronavirus has had a very large negative impact on my social life in college, as well. Being in a fraternity, I have seen these impacts very clearly. Social gatherings, functions, and other events have been cancelled, and this has hindered the ability of many college students to socialize and hang out with friends. This could serve as a possible explanation as to why the mental health of many college students had been negatively impacted by the pandemic. On the other hand, I asked the students to indicate if the coronavirus had positively impacted their social lives. The results of this are shown in **Figure 19**. Of the 119 respondents, only 3 (2.5%) indicated that COVID-19 had positively impacted their social lives. Clearly, the pandemic has ultimately harmed the social lives of many. It can also be inferred that the social lives of groups other than college students had been negatively impacted, as well. This is due to the fact that, as I have previously mentioned, so many public gatherings and events have been cancelled, and restaurants have been limited and restricted along with many other businesses.

Following the analysis of the social lives of college students, I felt it was necessary to dive into the other specific aspects of life that I have mentioned. I presented the students with the following statement: “COVID-19 has negatively impacted my ability to practice religion”. I asked the respondents to indicate whether they strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, or strongly agree with this statement. The results are

displayed in **Figure 24**. Of the 123 respondents, 32 (26%) strongly disagreed, 19 (15.4%) somewhat disagreed, 30 (24.4%) neither agreed nor disagreed, 30 (24.4%) somewhat agreed, and 12 (9.8%) strongly agreed. I somewhat expected the results of this question to be pretty mixed, as religion can certainly be practiced in isolation. However, a negative impact of one's ability to practice religion may stem from the restrictions imposed on places of worship during the pandemic. A large portion, 42 (34.1%) respondents, had suffered the negative impacts. This is a significant amount of the respondents. After this, I presented the students with the following statement: "COVID-19 has negatively impacted my ability to travel". I asked the respondents to indicate whether they strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, or strongly agree with this statement. **Figure 25** shows how the participants responded to this. Of the 123 respondents, 1 (0.8) somewhat disagreed, 11 (8.9%) neither agreed nor disagreed, 34 (27.6%) somewhat agreed, and 77 (62.6%) strongly agreed. It is apparent that the respondents felt that their ability to travel had been negatively impacted by the coronavirus. The fact that 111 (90.2%) of the survey participants at least somewhat agreed with the statement presented demonstrates that yet another important aspect of life has been severely influenced by the pandemic. Most people enjoy traveling and taking a vacation in order to relax and take a break from all of the hard work and common stresses of life, and the ability to do this has been largely eliminated by the pandemic. Finally, I presented the students with the following statement: "COVID-19 has negatively impacted my ability to exercise/participate in outdoor activities". I asked the respondents to indicate whether they strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, or strongly agree with this statement. Of the 123 respondents, 19 (15.4%) strongly disagreed, 26 (21.1%) somewhat disagreed, 20 (16.3%) neither agreed nor disagreed, 39 (31.7%) somewhat agreed, and 19 (15.4%) strongly agreed with the statement. These results can be seen in **Figure 26**. Again, the coronavirus had definitely harmed another huge aspect of life for many. Of the 123 respondents, 58 (47.2%) at least somewhat agreed with the statement, and, along with the other questions included in this data category, this indicated that a significant portion of the respondents had experienced a negative impact in another major feature of everyday life. Exercise and outdoor activities are essential in order to maintain good health, and the coronavirus has clearly made it more difficult for many to have this ability.

To further demonstrate the negative impacts of the coronavirus on large chunks of life, I asked the respondents if the coronavirus had negatively impacted their learning experience in college. The results are displayed in **Figure 32**. Of the 123 respondents, 116 (94.3%) said yes, and 7 (5.7%) said no. Learning is the priority in college, and it is evident from these results that the coronavirus has seriously harmed this aspect of life for college students.

When considering optimal strategies for dealing with the pandemic, these things need to be taken into account. Each data category discussed so far needs to be strongly considered when moving forward as a country. My survey has made it clear that young adults have suffered in many ways, and this cannot continue if the country desires to thrive. These specific aspects of life are incredibly important, and eliminating them or restricting them can be very damaging.

Data Category 5: What restrictions do college students believe should be in place?

As seen in the previous data categories, college students have suffered in many ways due to the pandemic, and this alone allows their opinions to be credible. Their opinions should be considered regarding restrictions moving forward in the United States. I feel that the beliefs of these individuals will deliver valuable information that will help formulate an optimal strategy.

When implementing an optimal strategy moving forward, I believe that the voices of these young adults should be heard, and the strategy moving forward needs to involve a solution that somewhat satisfies the desires of this group of individuals.

In order to evaluate this data category, I asked the respondents to indicate their opinions regarding some of the major policies that the United States had implemented during the pandemic. To begin, the following statement was displayed for the respondents: "Everyone should wear a mask in public during this pandemic". I asked the respondents to indicate whether they strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, or strongly agree with this statement. Of the 121 respondents, 9 (7.4%) strongly disagreed, 26 (21.5%) somewhat disagreed, 17 (14%) neither agreed nor disagreed, 19 (15.7%) somewhat agreed, and 50 (41.3%) strongly agreed with the statement, and this can be seen in **Figure 27**. Although some of the respondents did not agree that everyone should wear a mask during this pandemic, the major of them believed that everyone should wear a mask. Later, my survey stated, "All businesses should be fully open without restrictions". Of the 121 respondents to this statement, 28 (23.1%) indicated that they strongly disagreed, 26 (21.5%) somewhat disagreed, 13 (10.7%) neither agreed nor disagreed, 24 (19.8%) somewhat agreed, and 30 (24.8%) strongly agreed. Again, there is a lot of variation in these responses. The total number of respondents that at least somewhat disagreed with the statement is exactly equal to the total number of respondents that at least somewhat agreed with the statement. These results can be found in **Figure 28.** Following this, I presented this statement on my survey: "All public gatherings should be allowed." All 123 participants responded to this, and the results (seen in **Figure 29)** are as follows: 23 (18.7%) strongly disagreed, 28 (22.8%) somewhat disagreed, 20 (16.3%) neither agreed nor disagreed, 24 (19.5%) somewhat agreed, and 28 (22.8%) strongly agreed. Again, the results are pretty even across the board. In addition, I presented the following statement to the participants: "All places of worship should be fully open without restrictions". Of the 123 respondents, 24 (19.5%) strongly disagreed, 25 (20.3%) somewhat disagreed, 12 (9.8%) neither agreed nor disagreed, 25 (20.3%) somewhat agreed, and 37 (30.1%) strongly agreed. This question also yielded mixed results, but there is a majority that at least somewhat agreed with the statements. These results can be seen in **Figure 30**. Lastly, I presented the following statement on my survey: "All international air travel should resume". Again, I asked the respondents to indicate whether they strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, or strongly agree with this statement. As seen in **Figure 31**, 14 (11.5%) strongly disagreed, 39 (32%) somewhat disagreed, 19 (15.6%) neither agreed nor disagreed, 34 (27.9%) somewhat agreed, and 16 (13.1%) strongly agreed with the statement. Yet another mixture of results, but there are a majority of respondents that at least somewhat disagreed with the statement.

Taking the results of all these questions into account, it is clear that there are many young adults who believed that there should be less restrictions moving forward, and there are many that believed restrictions should currently stay in place. This makes it somewhat difficult to determine how to satisfy the desires of young adults when it comes to restrictions implemented in the United States. It is simply impossible to please everyone in this situation. However, I believe that there can be some compromise. Moving forward, maybe just specific public gatherings can be allowed. Maybe more businesses can be opened, but not necessarily all of them. Another possible solution is that, when vaccines have been significantly distributed and taken by many, more restrictions can be lifted. Again, not everyone will be satisfied with how the pandemic is handled moving forward, and compromise appears to be the most realistic option

here. However, taking into account all of the information gathered from this survey, I believe that things need to change moving forward. The suffering that has been experienced by many over the past year has been made clear by the results of my survey, and this needs to turn around as soon as possible. College students, along with many others, need to be able to live normal chunks of life, and they need to be able to work and earn money. This is essential in order to protect the economy.

Data Category 6: Which countries have successfully mitigated the coronavirus through policy implementations?

In addition to my survey, I have gathered raw data that expresses the total coronavirus cases over specific periods of time for China and New Zealand. I have also gathered information regarding three major policies (stay-at-home requirements, facial coverings, and public transport) for these two countries. The reason I that chose to evaluate these two countries is because, when conducting my research, it became evident to me that China and New Zealand have economies that are recovering quicker than most countries, so I wanted to figure out how they have approached mitigating the coronavirus, as a successful approach to this is likely the reason for their quicker economic recovery. If it is true that their policy implementations have reduced spreading of the virus, then the United States should consider following the strategies of these two countries when it comes to controlling COVID-19.

First, I compiled China's total coronavirus cases each day from May 10th, 2020 through June 12th, 2020. Next to this, I have displayed the policies that have been implemented over this time period. The first column represents the dates, the second represents the total coronavirus cases, the third represents stay-at-home order, the fourth represents facial coverings, and the fifth column represents public transport. This can be seen in **Figure 33**. It can be seen that, over this time period, China had implemented each of these policies to similar degrees. The level of aggressiveness of these policies is represented by the "2" in the figure. Regarding stay-at-home restrictions, the "2" means that, over this period, citizens of China were required to not leave the house with exceptions for daily exercise, grocery shopping, and "essential" trips. For facial coverings, China's policy over this period involved requirements in some specified shared/public spaces with other people present outside of one's home. They were also required outside of the home when social distancing was not possible. The public transport policy over this period involved required closings or prohibiting most from using it. Level 0 and 1 aggressiveness for these policies would have included much less restriction during this period. This figure reveals that China was aggressive in its policy implementation strategies for this specific month long period. On May 10th, 2020, the total number of coronavirus cases for China was 84,010. On June 12th, 2020, their total number of coronavirus cases was 84,228. Over the span of a month, the total coronavirus cases in China grew by only 218. This shows great control of the virus, and this was due to the aggressive strategy that they employed over this period.

After analyzing China's approach, I dove into New Zealand's data. I went through the same process with New Zealand's data, compiling the total cases for them over a similar amount of time as China. Along with the total cases, I collected information for the same three policies that were used to evaluate China. Displayed in **Figure 34** is the data that was gathered. The first column represents the dates, the second represents the total coronavirus cases, the third represents stay-at-home order, the fourth represents public transport, and the fifth column represents facial coverings. The time period that I chose to evaluate was April 13th, 2020 through May 13th, 2020. On April 13th, the total number of coronavirus cases in New Zealand was 1349.

One month later, the total number was 1497, and it can be seen that this number was constant from May 10th through May 13th. Again, the numbers "0", "1", and "2" represent the level of aggressiveness for the policies implemented. Throughout this month long period, New Zealand's stay-at-home policy involved requirements to not leave the house with exceptions for daily exercise, grocery shopping, and "essential" trips. For the first couple weeks of this period, their public transport policy involved required closings or prohibiting most from using it, but then switched to a less restricted policy for the next couple weeks. Regarding facial coverings over this period, masks were not required at all. A possible explanation for this is that social distancing may have been utilized in an efficient manner, thus masks were not necessarily needed. These strategies proved to be successful, as there was only an increase in total cases by 148 over this period, which demonstrates great control over the disease. It can also be inferred that New Zealand switched to a less restrictive public transport policy due to the fact that the more aggressive restriction previously implemented had done its job in mitigating the disease. Again, the implementation of aggressive policies was able to mitigate the coronavirus.

Obviously, the aggressiveness that China and New Zealand utilized as an approach to reducing the spread of the coronavirus had paid off, as their economies are recovering faster than other countries. If the United States desires to achieve this too, it may be worth it to consider following the strategies of these two countries when moving forward. Aggressive policies can definitely reduce the virus, as demonstrated by China and New Zealand, but accountability and real enforcement of these aggressive policies would be key for the United States if this route is chosen in the near or distant future.

LIMITATIONS

Performing research for this project did not involve a ton of hurdles that impacted my ability to gather information. However, in conducting the research in this project, there were a few limitations that impeded my ability to gather information in the manner in which I had desired. This includes obstacles encountered for both my survey and gathering the data used to analyze China and New Zealand.

When creating my survey, I was sure to make it anonymous in an attempt to encourage complete transparency from the respondents. However, it would be incorrect of me to tell you definitively that every participant was totally honest with all of their responses. It is impossible to conclude how honest each participant was. In addition to this limitation, not every respondent filled out every question. For instance, there were a total of 123 participants in my survey, and multiple questions on my survey were answered by less than 123 respondents. This means that some participants skipped some questions on the survey. It is likely due to the fact that an answer for each question was not required, but rather optional. This only made it more difficult to collect efficient data. One thing I wish I would have done differently with the survey involves attempting to reach students at other universities. My survey was limited to students that only attend the University of Arkansas. It would have been interesting to see how answers compared from students that attend different schools. Another aspect that I wish I would have included in my survey is questions regarding the coronavirus vaccines. Looking back, I could have included questions such as, "Have you received a vaccination for the coronavirus?", or "Do you believe that the vaccines that have been developed to combat the coronavirus are safe to receive?". I believe questions like these would have supplied important information regarding the

perceptions of students towards the vaccines, and it would have allowed me to gain a better sense of how the vaccines have been distributed to college students.

The most important aspect of research is time, and this was one of the more prominent issues when it came to gathering raw data. Initially, I desired to collect data to compare for all 50 U.S. states, but this proved to be very difficult with the amount of time I had and ultimately was not feasible. I then decided to try to collect data regarding other countries in order to demonstrate that the United States should consider following the strategies of countries that have been successful in combating the coronavirus. Finding a good number of countries that have successfully combatted the virus was difficult, as the vast majority of countries continue to struggle with eliminating the disease. Ultimately, I was only able to locate data for China and New Zealand that demonstrated a successful mitigation of the virus through aggressive policies. Ideally, I would have been able to utilize more countries for this study, but this was unable to be accomplished. Regarding both the U.S. states and international approach to this study, I also found it difficult to find data that was able to export easily. Many websites included charts and significant numbers that would have been useful in this study, but many did not allow for the data to be exported, which made it difficult for me to utilize important data.

IMPLICATIONS AND FUTURE RESEARCH

To conclude, the coronavirus pandemic is an urgent and serious issue that has been unbelievably detrimental to the United States and the world as a whole. The purpose of this project is to determine whether or not there is an optimal approach to dealing with the coronavirus that would allow for the economy to be protected while allowing us to live normal chunks of life, and I believe the research I have conducted has provided answers to this. Through my research and my survey, I have gathered information that has allowed me to establish three key realizations.

The first realization is that not everyone will be pleased by the decisions that the United States will make moving forward. The United States prides itself on the freedom that the citizens are able to enjoy, and if strict policies are implemented moving forward, this will inevitably upset many Americans who wish to resume with normal life in all regards. If the United States chooses to lift restrictions moving forward, this group of Americans would be delighted, as normal life would carry on. On the other hand, many Americans, while most likely wanting normal life to resume, believe that strict policies should be implemented in order to ensure safety, so lifted restrictions would be upsetting to this group of Americans. This realization is further supported by my survey, as the college students surveyed provided mixed results regarding restrictions of large chunks of life. However, as I stated earlier in this study, compromise is definitely an option when it comes to this problem. Also, I believe it would be wise to implement a system in which businesses are opened up and events are allowed (both with masks and social distancing if possible), and each citizen has the choice to isolate or partake in these events and live normal life. Earlier in this research project, I revealed that older people are harmed more by the coronavirus than younger people, and I believe that giving these older people the choice to isolate or live normally would be extremely beneficial, as this gives them freedom in the circumstances. This option would also allow the economy to recover due to the fact that businesses would open, and this would result in jobs coming back.

The second realization is that there is a potential negative externality that needs to be handled by the United States. Earlier in this paper, it was briefly discussed that the behaviors of

younger people may negatively impact the older population and people who have underlying medical conditions. Lack of restrictions could lead to these more at-risk people feeling very unsafe, which harms their freedoms and hurts the economy in the sense that they would be less likely to go out and spend money. In order to prevent this negative externality and encourage this feeling of safety for those that are more at-risk, more aggressive restrictions could be implemented by the United States. As seen from the data presented regarding China and New Zealand, aggressive restrictions can lead to less coronavirus cases, and the more at-risk population would feel safe, thus assisting the United States economy in the long run.

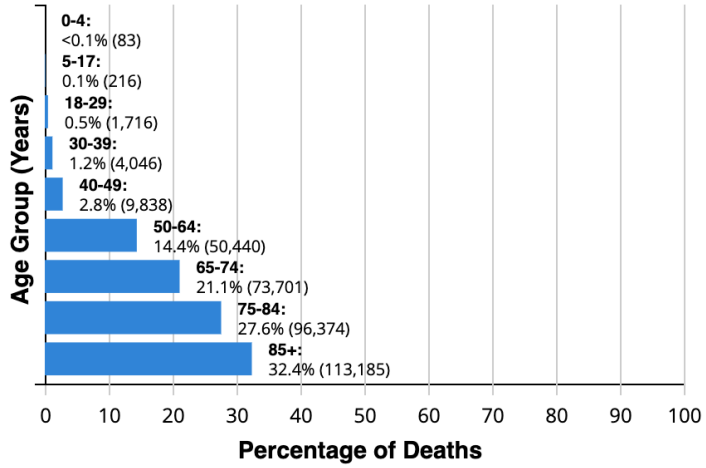
The third realization is that the United States could successfully implement aggressive policies (with accountability and enforcement) that would allow for the coronavirus to be mitigated. China and New Zealand are prime examples of this strategy, and I think there is a solid argument that the United States should follow this moving forward. These countries, through aggressive restrictions, were able to keep coronavirus cases down, and this led to their economies picking back up quicker. This is what the United States is aiming to achieve. As previously discussed, experts, such as Anthony Fauci, have stated that normal life could resume as soon as this year (2021) if precautions are followed for just a little bit longer. If the aggressive restrictions by the United States are successfully enforced over the summer of 2021, then normal life could come back quickly. In addition to these continued restrictions, citizens are increasingly receiving the vaccines for the coronavirus, and the United States is continuing to distribute the vaccines as much as possible. I believe that the combination of aggressive restrictions over the next couple months, along with more and more citizens receiving vaccines, could definitely lead to normal life resuming quickly, thus allowing for economic recovery to begin. This appears to be the most realistic optimal strategy for the United States moving forward.

Regarding future research into this topic or in the event that another pandemic occurs, there are other steps that can be taken to enhance this research that I would encourage. If there is sufficient time for every U.S. state's policies and cases to be analyzed, I think this would be a huge plus in demonstrating what an optimal strategy would be. I also think it would be beneficial to dive into international perspectives more, and other policies could be utilized in analysis, as well.

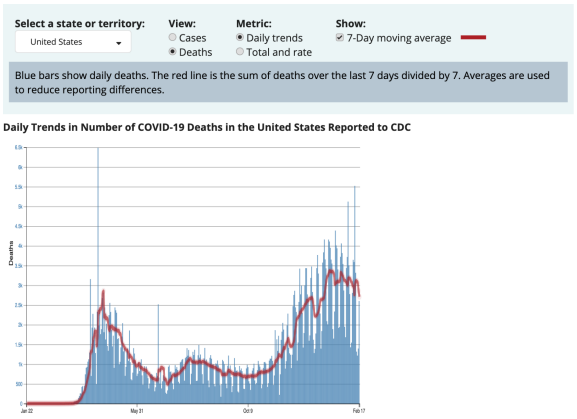
In addition to this, I would encourage future researchers of this topic to expand their scope of participants if a survey is chosen as the research methodology. As I mentioned, my survey only included students at the University of Arkansas. Future research could include students at other universities, and I think it would also be beneficial to include a variety of age groups in order to gain a better understanding of the topic.

In conclusion, I believe that this study has provided many valuable insights, and I greatly enjoyed diving into this topic. Although it is difficult to establish what an optimal strategy would be in order to fight a pandemic, the research that I have conducted allows for us to consider a variety of options that could possibly mitigate the coronavirus in the near future. Realistically, aggressive restrictions for a certain period, along with the distribution of vaccines, appear to provide a path to economic recovery and normal life in the quickest manner.

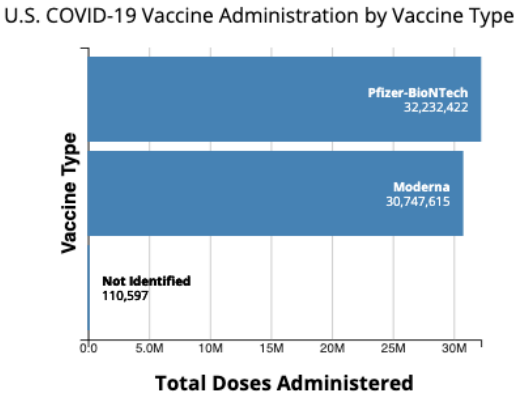
APPENDIX



https://covid.cdc.gov/covid-data-tracker/#demographics
Figure 2 – COVID-19 deaths by age group

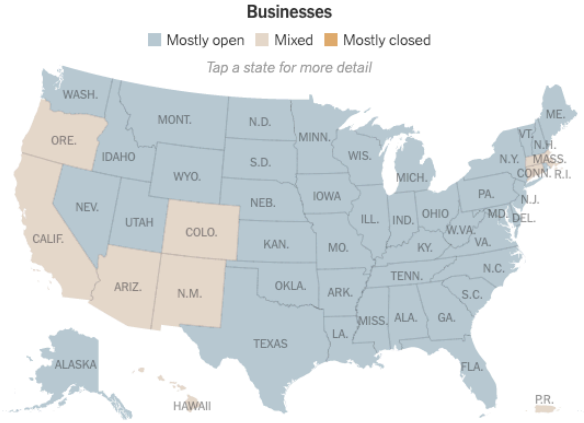


https://covid.cdc.gov/covid-data-tracker/#trends_dailytrendscases
Figure 3 – COVID-19 daily trend of deaths



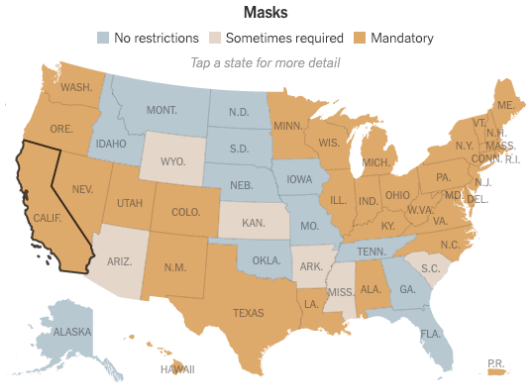
https://covid.cdc.gov/covid-data-tracker/#vaccinations

Figure 4 – Administered vaccines



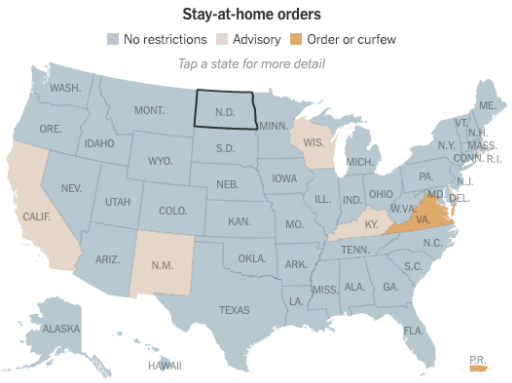
https://www.nytimes.com/interactive/2020/us/states-reopen-map-coronavirus.html

Figure 5 – Business restrictions in the U.S. as of February 26th, 2021



https://www.nytimes.com/interactive/2020/us/states-reopen-map-coronavirus.html

Figure 6 – Mask restrictions in the U.S. as of February 26th, 2021



https://www.nytimes.com/interactive/2020/us/states-reopen-map-coronavirus.html
Figure 7 – Stay-at-home orders in the U.S. as of February 26th, 2021

1.3M sports jobs are at risk due to COVID shutdown

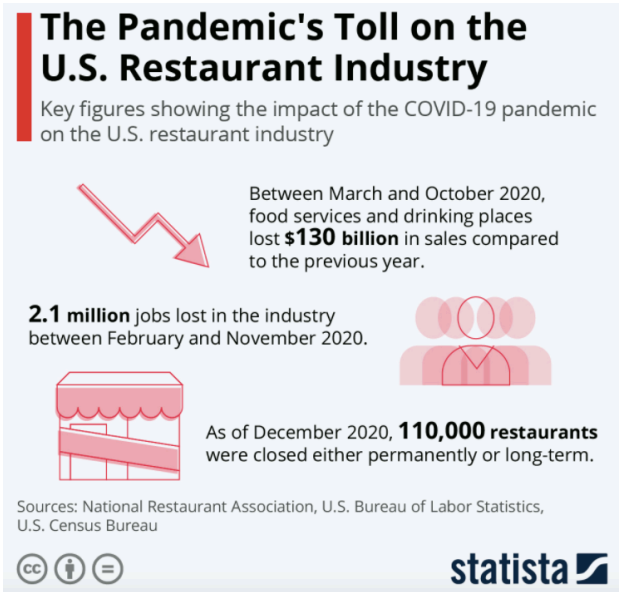
OCCUPATION	JOBS IMPACTED BY COVID SHUTDOWN
Fitness Trainers and Aerobics Instructors	371,607
Coaches and Scouts	278,932
Amusement and Recreation Attendants	192,889
Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers	158,281
Recreation Workers	68,566
Umpires, Referees, and Other Sports Officials	28,430
Gaming Dealers	26,448
Fishers and Related Fishing Workers	20,069
Athletes and Sports Competitors	17,565
Agents and Business Managers of Artists, Performers, and Athletes	15,151
Entertainers and Performers, Sports and Related Workers, All Other	11,884
Bicycle Repairers	11,312
Hunters and Trappers	8,356
Locker Room, Coatroom, and Dressing Room Attendants	8,355

Gaming and Sports Book Writers and Runners	7,775
Athletic Trainers	7,649
Gaming Service Workers, All Other	4,354
Recreational Vehicle Service Technicians	3,897
Dancers	3,492
Fish and Game Wardens	3,221
Public Address System and Other Announcers	2,960
Choreographers	1,802
Radio and Television Announcers	1,644
Entertainment Attendants and Related Workers, All Other	1,637
Statisticians	1,379
Gaming Surveillance Officers and Gaming Investigators	919
Reservation and Transportation Ticket Agents and Travel Clerks	749
Recreational Therapists	229
Total	**1,259,552**

Source: Emsi industry data 2020

https://www.economicmodeling.com/2020/05/28/the-economic-impact-of-covid-19-on-us-sports-up-to-92-6k-lost-every-minute/#:~:text=Up%20to%20%2492.6K%20Lost%20Every%20Minute&text=World%20War%20II%20didn't%20shut%20down%20sports.&text=The%20economic%20impact%20of%20COVID%2D19%20on%20US%20sports%20has,furloughed%2C%20reduced%2C%20or%20erased

Figure 8 – Sports jobs at risk due to COVID-19



https://www.statista.com/chart/23765/impact-of-the-covid-19-pandemic-on-the-us-restaurant-industry/#:~:text=Restaurant%20and%20foodservice%20industry%20in%20the%20U.S.,-As%20the%20coronavirus&text=By%20the%20end%20of%20November,term%20due%20to%20the%20crisis

Figure 9 – COVID-19 impact on restaurants

What would make the economy look better or worse in 2021?

Share of economists who predicted that certain scenarios would increase or decrease GDP growth between the fourth quarters of 2020 and 2021

SCENARIO	IN THIS SCENARIO, 2021 GROWTH WILL BE... SUBSTANTIALLY LOWER	ABOUT THE SAME	SUBSTANTIALLY HIGHER
Vaccine approved by Election Day	0%	50%	50%
Democrats control Presidency + Congress	0	53	47
K-12 classes are taught in person	**3**	**50**	**47**
Biden wins; Congress stays same	6	94	0
K-12 classes are taught virtually	**31**	**66**	**3**
Trump wins; Congress stays same	41	59	0
Election viewed as illegitimate	47	50	3
No additional stimulus by November	59	38	3

The survey of 32 economists was conducted Sep. 18-21.

SOURCE: FIVETHIRTYEIGHT/IGM COVID-19 ECONOMIC SURVEY

https://fivethirtyeight.com/features/experts-think-the-economy-would-be-stronger-if-covid-19-lockdowns-had-been-more-aggressive/

Figure 11 – Scenarios that economists believe would make economy better or worse in 2021

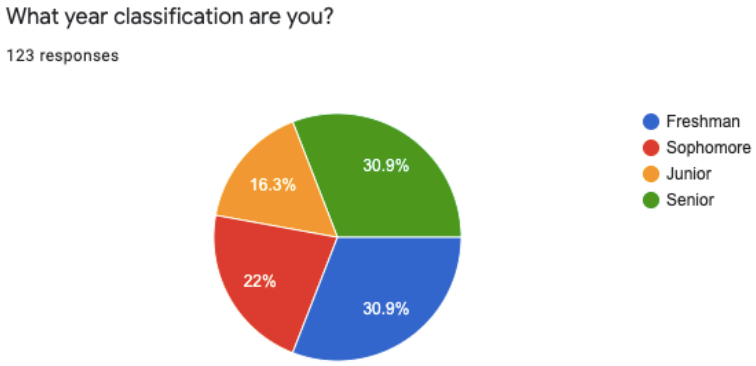


Figure 12 – Year classification of participants

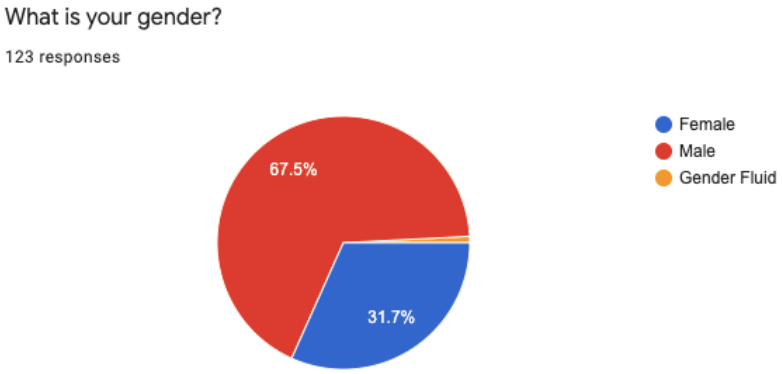


Figure 13 – Gender of participants

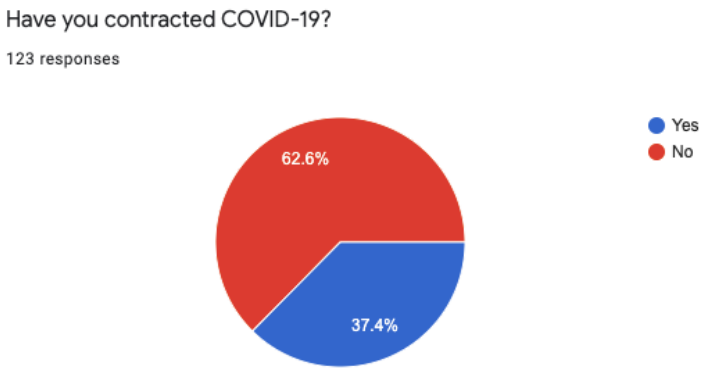


Figure 14 – How many participants have contracted COVID-19?

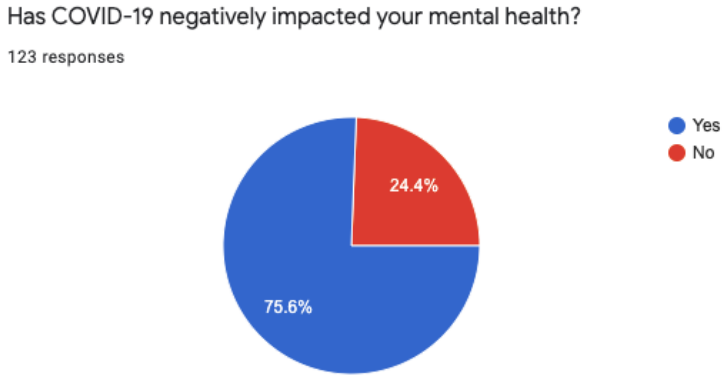


Figure 15 – COVID-19 impact on mental health

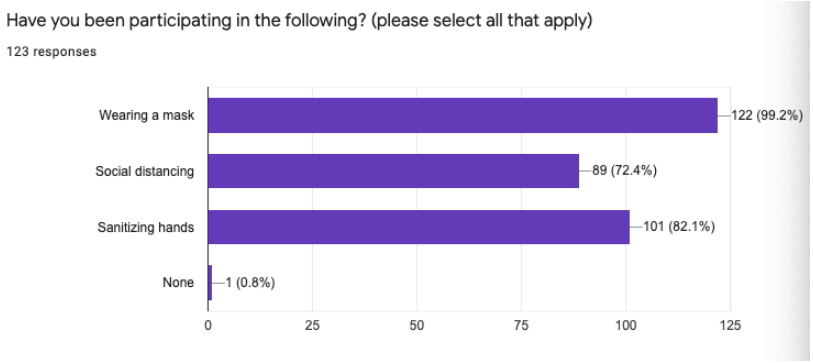


Figure 16 – COVID-19 safety participation

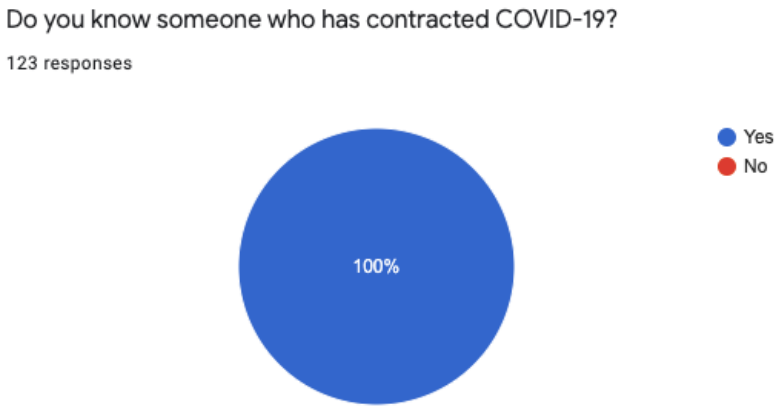


Figure 17 – Spreading of COVID-19

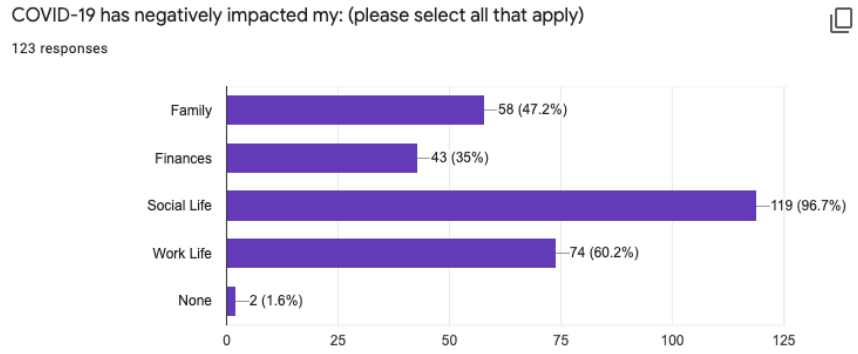


Figure 18 – Negative impacts of the virus

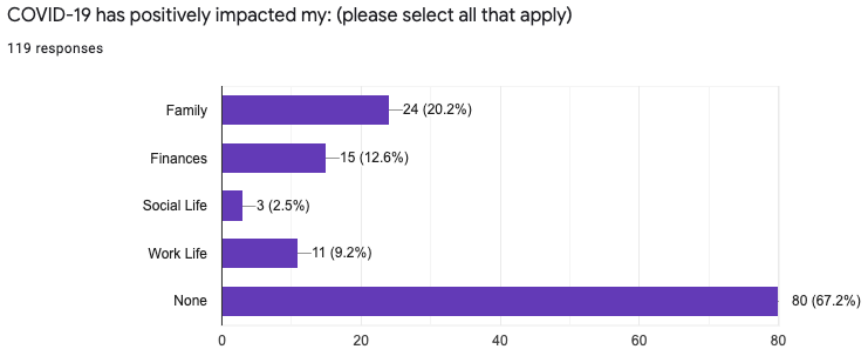


Figure 19 – Positive impacts of the virus

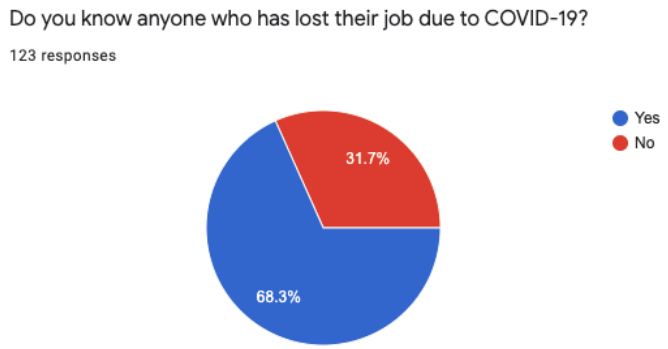


Figure 20 – Job loss due to the virus

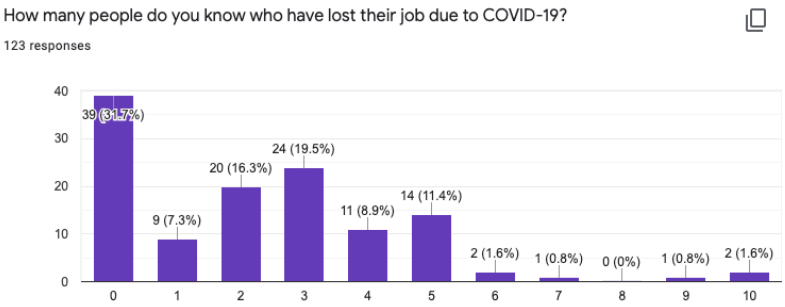


Figure 21 – How many have lost job due to the virus

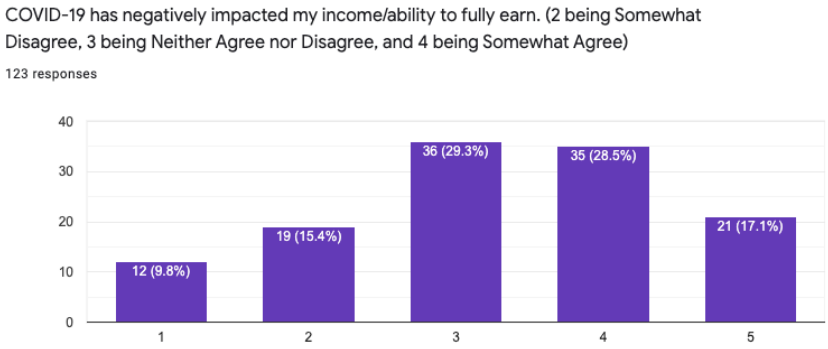


Figure 22 – Impact of the virus on income/ability to fully earn

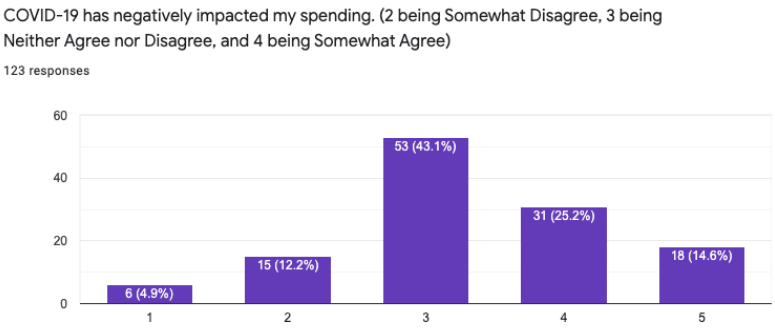


Figure 23 – Impact of the virus on spending

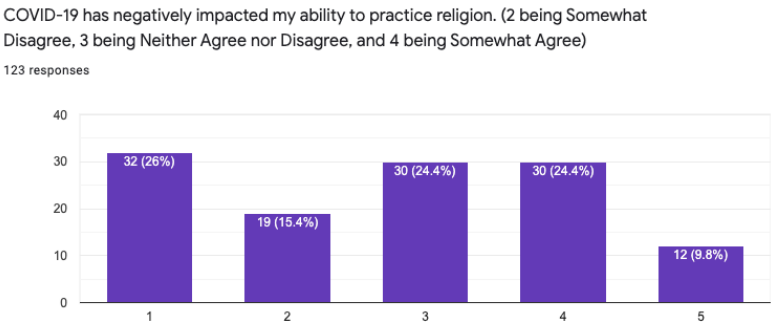


Figure 24 – Impact of the virus on ability to practice religion

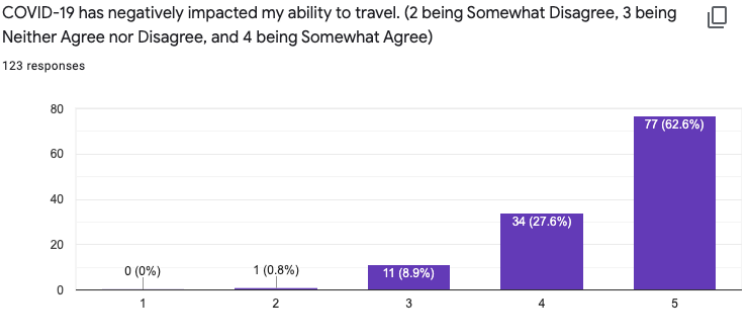


Figure 25 – Impact of the virus on travel

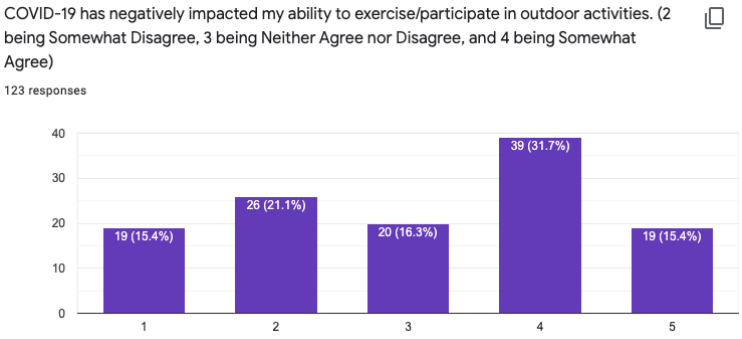


Figure 26 – Impact of the virus on exercise/outdoor activities

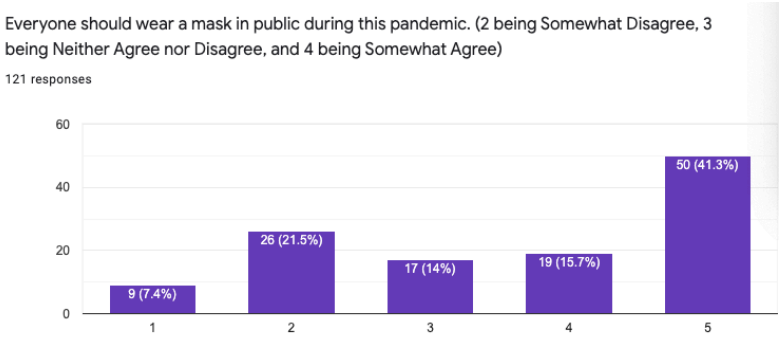


Figure 27 – Mask requirements during pandemic

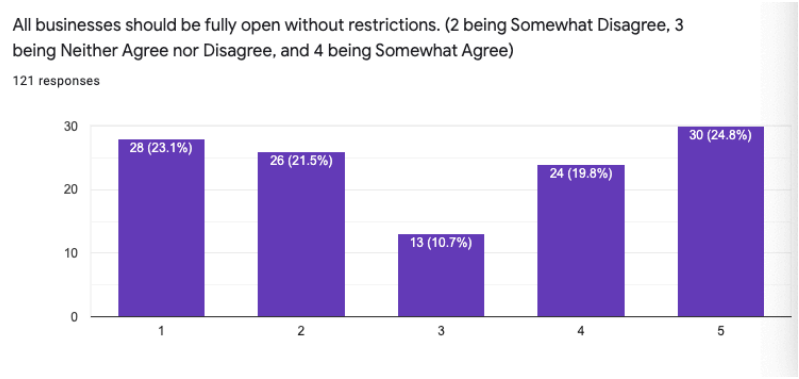


Figure 28 – Business restrictions during pandemic

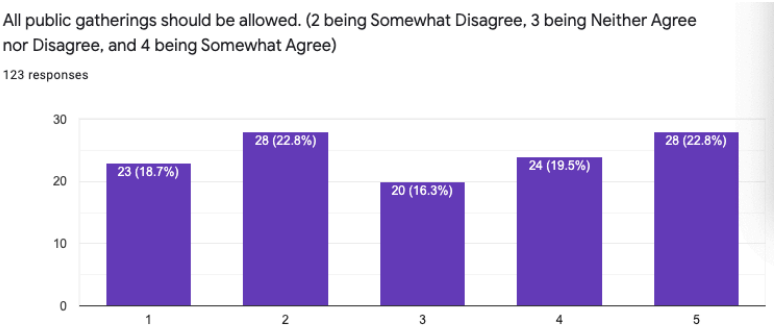


Figure 29 – Public gathering during pandemic

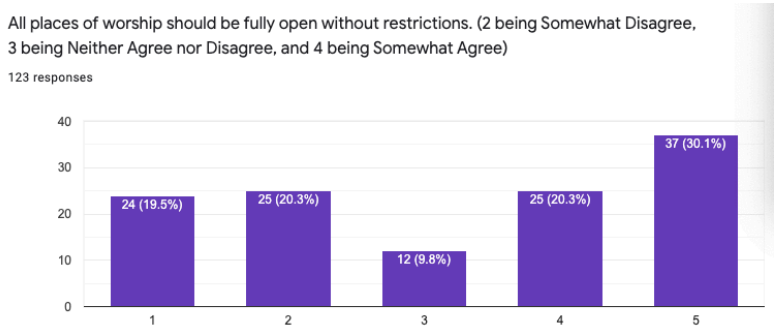


Figure 30 – Worship during pandemic

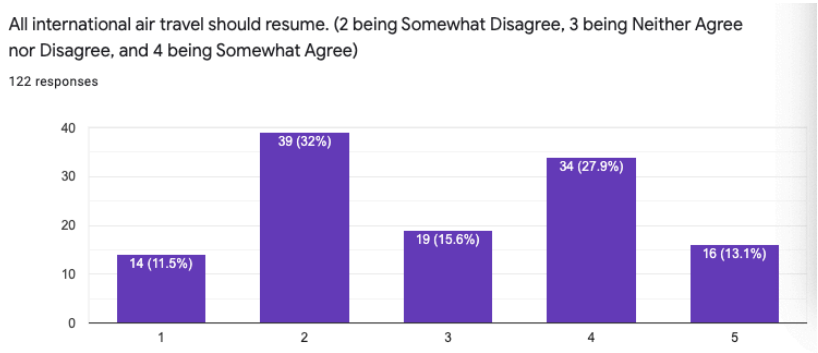


Figure 31 – International air travel during pandemic

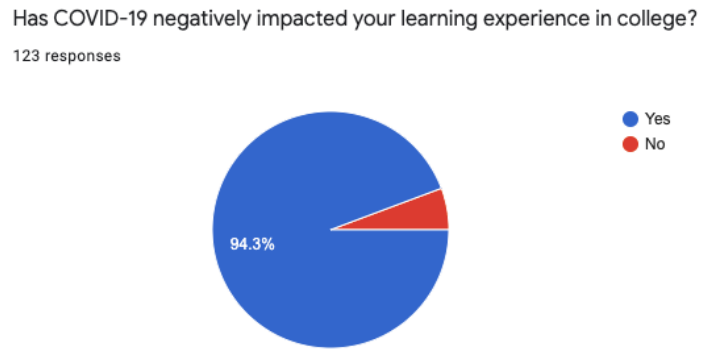


Figure 32 – COVID-19 impact on learning experience in college

5/10/20	84010	2			2		2
5/11/20	84011	2			2		2
5/12/20	84018	2			2		2
5/13/20	84024	2			2		2
5/14/20	84029	2			2		2
5/15/20	84038	2			2		2
5/16/20	84044	2			2		2
5/17/20	84054	2			2		2
5/18/20	84063	2			2		2
5/19/20	84063	2			2		2
5/20/20	84063	2			2		2
5/21/20	84063	2			2		2
5/22/20	84081	2			2		2
5/23/20	84084	2			2		2
5/24/20	84095	2			2		2
5/25/20	84102	2			2		2
5/26/20	84103	2			2		2
5/27/20	84106	2			2		2
5/28/20	84106	2			2		2
5/29/20	84123	2			2		2
5/30/20	84128	2			2		2
5/31/20	84146	2			2		2
6/1/20	84154	2			2		2
6/2/20	84161	2			2		2
6/3/20	84160	2			2		2
6/4/20	84171	2			2		2
6/5/20	84177	2			2		2
6/6/20	84186	2			2		2
6/7/20	84191	2			2		2
6/8/20	84195	2			2		2
6/9/20	84198	2			2		2
6/10/20	84209	2			2		2
6/11/20	84216	2			2		2
6/12/20	84228	2			2		2

https://ourworldindata.org/policy-responses-covid

Figure 33 – China's aggressive policies/total COVID-19 cases

4/13/20	1349	2	2	0
4/14/20	1366	2	2	0
4/15/20	1386	2	2	0
4/16/20	1401	2	2	0
4/17/20	1409	2	2	0
4/18/20	1422	2	2	0
4/19/20	1431	2	2	0
4/20/20	1440	2	2	0
4/21/20	1445	2	2	0
4/22/20	1451	2	2	0
4/23/20	1456	2	2	0
4/24/20	1461	2	2	0
4/25/20	1470	2	2	0
4/26/20	1469	2	2	0
4/27/20	1472	2	2	0
4/28/20	1474	2	1	0
4/29/20	1476	2	1	0
4/30/20	1479	2	1	0
5/1/20	1485	2	1	0
5/2/20	1487	2	1	0
5/3/20	1487	2	1	0
5/4/20	1486	2	1	0
5/5/20	1488	2	1	0
5/6/20	1489	2	1	0
5/7/20	1490	2	1	0
5/8/20	1492	2	1	0
5/9/20	1494	2	1	0
5/10/20	1497	2	1	0
5/11/20	1497	2	1	0
5/12/20	1497	2	1	0
5/13/20	1497	2	1	0

https://ourworldindata.org/policy-responses-covid

Figure 34 – New Zealand's policies/total COVID-19 cases

Honors Thesis Survey

Hello University of Arkansas students,

I am a senior in the Walton Honors Program, and my thesis revolves around COVID-19 and what an optimal strategy would be for the United States moving forward. Your help in filling out this 10-minute survey would be very much appreciated and would provide valuable information that will be utilized to further explain optimal strategies regarding COVID-19. You will not be identified in any way with the responses that you give, and refusing to participate will not adversely affect any other relationship with the University. COVID-19 has led to deteriorating mental health for many, and I am aware that discussing the impacts of COVID-19 may be uncomfortable, but your opinions are important, and your feedback is appreciated in this study. If you have any questions, please contact me (sstate@uark.edu) or my thesis advisor, Amy Farmer (afarmer@walton.uark.edu). If you have questions or concerns about your rights as a research participant, please contact irb@uark.edu.

Thank you for your help. Skyler Tate

What year classification are you?

- ◯ Freshman
- ◯ Sophomore
- ◯ Junior
- ◯ Senior

What is your gender?

- ◯ Female
- ◯ Male
- ◯ Other...

Has COVID-19 negatively impacted your learning experience in college?

- ◯ Yes
- ◯ No

Have you contracted COVID-19?

- ◯ Yes
- ◯ No

Everyone should wear a mask in public during this pandemic. (2 being Somewhat Disagree, 3 being Neither Agree nor Disagree, and 4 being Somewhat Agree)

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

COVID-19 has negatively impacted my: (please select all that apply)

- [ ] Family
- [ ] Finances
- [ ] Social Life
- [ ] Work Life
- [ ] None

COVID-19 has positively impacted my: (please select all that apply)

- [ ] Family
- [ ] Finances
- [ ] Social Life
- [ ] Work Life
- [ ] None

Has COVID-19 negatively impacted your mental health?

- ○ Yes
- ○ No

Have you been participating in the following? (please select all that apply)

- [ ] Wearing a mask
- [ ] Social distancing
- [ ] Sanitizing hands
- [ ] None

Do you know someone who has contracted COVID-19?

- ( ) Yes
- ( ) No

COVID-19 has negatively impacted my ability to practice religion. (2 being Somewhat Disagree, 3 being Neither Agree nor Disagree, and 4 being Somewhat Agree)

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

COVID-19 has negatively impacted my ability to travel. (2 being Somewhat Disagree, 3 being Neith Agree nor Disagree, and 4 being Somewhat Agree)

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

COVID-19 has negatively impacted my spending. (2 being Somewhat Disagree, 3 being Neither Agree nor Disagree, and 4 being Somewhat Agree)

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

All businesses should be fully open without restrictions. (2 being Somewhat Disagree, 3 being Neither Agree nor Disagree, and 4 being Somewhat Agree)

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

All public gatherings should be allowed. (2 being Somewhat Disagree, 3 being Neither Agree nor Disagree, and 4 being Somewhat Agree)

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

All places of worship should be fully open without restrictions. (2 being Somewhat Disagree, 3 being Neither Agree nor Disagree, and 4 being Somewhat Agree)

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

All international air travel should resume. (2 being Somewhat Disagree, 3 being Neither Agree nor Disagree, and 4 being Somewhat Agree)

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

COVID-19 has negatively impacted my income/ability to fully earn. (2 being Somewhat Disagree, 3 being Neither Agree nor Disagree, and 4 being Somewhat Agree)

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

Do you know anyone who has lost their job due to COVID-19?

- ○ Yes
- ○ No

How many people do you know who have lost their job due to COVID-19?

0	1	2	3	4	5	6	7	8	9	10
○	○	○	○	○	○	○	○	○	○	○

COVID-19 has negatively impacted my ability to exercise/participate in outdoor activities. (2 being Somewhat Disagree, 3 being Neither Agree nor Disagree, and 4 being Somewhat Agree)

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

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