



## **Factors Influencing Vaccine Decision-Making at a Public University: A Descriptive Study**

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### **Abstract**

**Objective:** The aim of this research was to examine factors that influenced COVID-19 vaccine decision-making among members of a public university community. **Methods:** A qualitative descriptive study design was utilized to gather survey data from participants. The themes were divided among two large groups, those who were proponents and those who were opposed to the vaccine mandate. The researchers utilized *TAGUETTE* software to analyze participants' responses. The responses then were categorized into common themes, which were based on the overriding essence of the answers. **Findings:** Three main themes emerged from the group that supported COVID-19 vaccine mandates including: the vaccine was a primary means of mitigating the pandemic and facilitating the return to normal social and economic life; the vaccine would protect the most vulnerable individuals in the population from getting the COVID-19 virus; and the vaccine would likely reduce death rates. For the group against COVID-19 vaccine mandates, the three primary themes that emerged included: mandating the vaccine was a breach of personal autonomy; the presence of doubts and mistrust of the vaccine's effectiveness in halting the spread of COVID-19; and concerns about the adverse effects of the vaccine. **Discussion:** The COVID-19 pandemic has raised concerns and questions about the ethics of mandating vaccines. The type and nature of ethical dilemmas are essential to consider when considering the health of the public versus the rights of individuals, especially when mandates are put forth during vaccination initiatives. **Conclusions:** The results of the study provided a better understanding of factors associated with vaccine decision-making as well as some of the ethical issues persons face when deciding whether to receive the vaccine despite mandates to do so. The researchers suggest adopting an ethical framework to adequately address ethical concerns and questions raised by the public during vaccine mandates. Further, effective communication on the part of legislators, public health officials and nurses may instill trust as people decide whether or not to receive a vaccine. **Implications for practice:** Ethical considerations should be taken into account during COVID-19 vaccine mandates, or at the

minimum, be given more weight. Nurses should be transparent about potential ethical concerns, the latest scientific findings concerning vaccines, and the benefits versus harms of vaccines.

*Key Words:* COVID-19 pandemic; COVID-19 vaccine; vaccine hesitancy; vaccine refusal; vaccine mandate; medical ethics.

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Weighing the costs, benefits and adverse effects of vaccines has a long history in the United States. During the COVID-19 pandemic, this issue was further complicated by the initiative to mandate vaccination which resulted in much debate amongst politicians, school administrators, health professionals and ordinary citizens. In order to gather background on vaccine mandates as well as the Covid-19 virus, a literature review was conducted. The first author met with a librarian to develop a search strategy and decide on key search terms. The terms utilized were: “covid-19 vaccine,” “mandating covid-19 vaccines,” “effect of covid-19 vaccine,” and “vaccine refusal.” The search engines CINAHL, PubMed, Medline and JSTOR were utilized. In addition, magazines, newspaper articles and gray literature were searched.

### **Literature Review**

Vaccine mandates have been around for some time. During the time of the American Revolution in the seventeen hundreds smallpox raged through the United States army. At that time, smallpox outbreaks were so far-reaching among soldiers that it led to a failed military campaign. The severity of the outbreak led General George Washington to mandate that all soldiers be inoculated against smallpox (United States Department of the Interior, n.d.). He reasoned that vaccinating soldiers was a “necessity that not only authorizes but seems to require that measure, we should have more to dread from [the smallpox], than from the Sword of the Enemy,” (National Archives and Records Administration, n.d.).

In 1809, Massachusetts instituted the first vaccine mandate against smallpox. The law authorized the state to require smallpox vaccinations for anyone over the age of twenty-one (Centers for Disease Control and Prevention, 2020). Following Massachusetts’ lead, states such as California and New York subsequently passed similar statutes (Centers for Disease Control and Prevention, 2020). In 1902, Congress passed the *Biologics Control Act* in response to tetanus outbreaks in New Jersey (Centers for Disease Control and Prevention, 2020). Furthermore, the *Biologics Control Act* marked the first federal law regulating the manufacture of vaccines (Centers for Disease Control and Prevention, 2020). Opposition to mandatory vaccination increased as the federal government and states began to enforce these laws.

Vaccine mandates, however, were challenged and repealed in states like Massachusetts, Utah, West Virginia and Wisconsin (Centers for Disease Control and Prevention, 2020). Furthermore, disagreements regarding vaccine mandates have reached the United States Supreme Court in the past. In 1905, the United States Supreme Court concluded that the public good can, “trump personal liberties,” when it comes to health and welfare, and “it is within the

police power of a State to enact a compulsory vaccination law.” (*Jacobson v. Massachusetts*, 1905).

The surge of new variants of the COVID-19 virus during the fall of 2021, including Delta and Omicron, resulted in many organizations and individuals calling for mandatory vaccinations, while others had remained opposed to such a measure. Vaccine hesitancy and refusal have also occurred in the past, long before the development of COVID-19 vaccines. In the last two decades, the United States has witnessed an era of vaccination refusal. The source of mistrust in vaccines can be traced in part to two incidents that occurred during the 1990s (Larson & Mnookin, 2016). The first was a medical article published in *The Lancet Journal* in 1998, in which British physician Andrew Wakefield put forth that a relationship existed between the measles, mumps, and rubella (MMR) vaccine and a “new syndrome,” of autism and bowel disease (Wakefield et al., 2011). The publication sparked a huge controversy. The medical community addressed Wakefield’s theory with mixed responses. Some thought it was best to address his speculation and strike while the iron was hot; some thought it was best to ignore him, while others remained vacillating between the two responses. Larson and Mnookin (2016) suggest that the absence of an official united response from the medical community gave a platform for Wakefield to manipulate the public (Larson & Mnookin, 2016). The media provided him with unrestricted access to publicize and circulate his opinions. As the vaccine panic took off, Godlee et al., (2011) explained that critics hastily elucidated that the article was a small case study with no measured controls. Later, Wakefield’s theory was debunked showing that he committed fraud by lying about his conflicts of interest (Godlee et al., 2011). However, by the time the truth came to the surface, Wakefield had already been recognized as a vaccine specialist whose work frightened much of the public from receiving the MMR vaccine.

The second incident occurred in 1999 when the United States Food and Drug Administration (FDA) insisted on the immediate removal of thimerosal from standard pediatric vaccines (Larson & Mnookin, 2016). The FDA and American Academy of Pediatrics (AAP) suggested the removal of thimerosal, a mercury-based chemical preservative in vaccines, as a prophylactic measure because of the emerging public concern that its presence in vaccines was dangerous due to its toxic effects (Larson & Mnookin, 2016). Conversely, Larson and Mnookin (2016) describe that the lack of a clear explanation from the FDA and AAP strengthened Wakefield’s acolytes and fueled the rise of a parent-led movement of “Mercury Moms” that fervently believed that thimerosal caused autism in children (Larson & Mnookin, 2016). Over time, Wakefield’s admirers and the “Mercury Moms” joined forces resulting in a ferocious anti-vaccine movement that was largely supported by deceitful physicians and fear-based exploiting skeptical media outlets (Larson & Mnookin, 2016). These two events played a key role in decreasing the COVID-19 vaccination rate among the public sector.

At the time of this study, more than 100,000 American citizens were hospitalized with COVID-19 and over two thousand individuals were dying on a daily basis (Centers for Disease Control and Prevention, 2022a). According to the United States government, over 97% of these individuals share one commonality, none of them have received the COVID-19 vaccine despite its availability (The United States Government, 2021). In other words, the virus became the pandemic of unvaccinated people. In spite of the Centers for Disease Control’s (CDC) diligent

efforts to increase the vaccination rate, millions of Americans from diverse backgrounds remain unvaccinated or are unwilling to change their views on getting it. As of January 2022, 25% of the United States population had not been vaccinated against COVID-19 (CDC, 2022a). Vaccine refusers often do not share a single coalescing ideology or philosophy; however, their refusal can be divided into three sectors: political, ethical and religious.

As the United States enters its third year of the pandemic, more than 1 million people have died from COVID-19 (CDC, 2022a). Despite the overwhelming research evidence that supports the effectiveness of the COVID-19 vaccine in stemming the spread of the Coronavirus, many remain unvaccinated (United States National Library of Medicine, 2021). Analyzing the pandemic in the United States reveals it is a tale of two pandemics. As of spring 2021, the mass distribution and mandating of the COVID-19 vaccine has profoundly altered the nature of the pandemic. The vaccine has decreased the likelihood of dying from COVID-19 and CDC data shows that the risk of dying from COVID-19 is fifteen times higher in unvaccinated individuals (CDC, 2022a). The development of an effective COVID-19 vaccine established a clear pathway to end the pandemic.

Despite this, vaccination rates have fluctuated and have been inadequate to halt the spread of the virus. A contributing factor among some persons who have refused the vaccine is their political views (Albrecht, 2022). In his study, Albrecht (2022) confirmed that in cities with a high percentage of Republicans, vaccination rates were considerably lower, and COVID-19 related deaths were notably higher. He also mentioned resistance to the COVID-19 vaccine surfaced almost immediately after it was revealed that production of the vaccine was proceeding. False claims fueled a wide range of “conspiracy theories” that emerged on social media sites and even some news outlets. False claims included that the vaccine would negatively affect fertility, alter the individual’s genome, or that the government sought to implant microchips into people’s brains to monitor their behaviors (Romer & Jamieson, 2020). The false claims were fueled by tweets from President Donald Trump both before his election and after his presidency. In an article by Hornsey et al. (2020), the effect of presidential tweets on vaccine hesitancy was examined. The findings suggested that persons who voted for President Trump voters were more likely to believe, “conspiracy theories,” and were more concerned about the adverse effect of the vaccine (Hornsey et al., 2020). The findings suggested that people who buy into false claims were less likely to receive the vaccine, reducing vaccination rates and subsequently increasing COVID-19 infection rates.

Since April of 2021, Democrats have made up the majority of the vaccinated population (Kirzinger et al., 2021). Meanwhile, the number of Republicans who are unvaccinated has grown. Republicans account for the majority of the unvaccinated population (60%), while Democrats only account for 17% of the unvaccinated population (Kirzinger et al., 2021). The effect of political polarization affected not only the vaccination rate, but the death rates as well given that vaccination rates and COVID-19 deaths highly correspond with each other (Wood & Brumfiel, 2022). Researchers from NPR analyzed the effect of political polarity in shaping the COVID-19 pandemic (Wood & Brumfiel, 2022). The researchers examined death rates in 3,000 counties across the United States during the spring of 2021 when vaccines became widely

available to the public. The results demonstrated that counties that were categorized as “Republican counties,” that primarily voted for President Donald Trump in the 2020 election, had 2.73 times the death rates compared to “Democratic counties,” that voted for President Biden (Kirzinger et al., 2021). It is essential to note that disparity in death rates between the parties did not exist before the existence of the vaccine, since before then Democratic and Republican counties were affected at the same rate (Wood & Brumfiel, 2022).

Another important finding in the study by Hamel et al. (2021) was that people who said they would definitely not be vaccinated against COVID-19 primarily consumed two news sources: Fox News and social media. Republicans’ most trusted news source for COVID-19 information is Fox News (Hamel et al., 2021). The analysts from the Vaccine Monitor research project found that 88% of the people who consume Fox News believe in at least one or more false statements about COVID-19 (Hamel et al., 2021b). The report also suggests that 64% of unvaccinated individuals believe or are uncertain about at least four of eight false statements (Hamel et al., 2021). Furthermore, 46% of Republicans believed or were uncertain about at least half the false statements, which is three times the share of Democrats (Hamel et al., 2021). The most widely believed statement, by Republicans was not concerning the vaccine but that the government is far exaggerating the number of COVID-19 deaths (Hamel et al., 2021). Doubting the death counts has led many people to underestimate the lethality of the virus. Not to mention that the pandemic came at the start of President Biden’s induction, which increased the gap between Republicans and Democrats. The extreme political polarization turned the vaccine into a political battle rather than a means to protect public health.

The United Nations (U.N.) declared international freedom of religion as a basic human right more than a half-century ago (International Covenant on Civil and Political Rights, 1996). Yet, the organization agrees this right is limited in the name of protecting the public welfare (International Covenant on Civil and Political Rights, 1996). Amid new vaccine mandates designed to reduce the spread of the Delta and Omicron variants and contain the pandemic, the number of vaccination refusals based on religious exemption has similarly increased. For instance, the United States Air Force has received more than 5,000 applications for religious exemptions from active-duty soldiers (Secretary of the Air Force Public Affairs, 2022). One deeply held belief against the vaccine stems from the notion that embryonic tissue cells are used to create components of the vaccine. The majority of religions, including Catholicism and Buddhism (Pelčić et al., 2016), maintain the utmost reverence for the concept of the value of life hence they oppose the use of vaccines originating from aborted fetuses or any form of life. For instance, The Catholic Church has recommended that its followers seek alternatives to vaccines that were developed from aborted human fetuses (The Linacre Quarterly, 2019). Additionally, Pelčić et al. (2016) suggested that one of the religious objections to vaccines derives from the belief that the human body is sacred, must be free from blood, chemicals, or tissues from animals and cured only by God and prayer alone. In the case of the COVID-19 vaccine, however, many individuals use exceptions as an excuse for avoiding getting vaccines (Severance & Dorn, 2022). According to a new survey from the Public Religion Research Institute (PRRI) and the Interfaith Youth Core (IFYC), 59% of Americans from virtually every major religious group indicates that many people are exploiting religion as an excuse to avoid vaccine requirements (Interfaith Youth

Core, 2021). That has not stopped the anti-COVID-19 vaccine group from finding additional ways to avoid receiving the COVID-19 vaccine. In the state of Oregon, for example, 90% of requests for exemption for the COVID-19 vaccine mandate were religious (Severance & Dorn, 2022). It reached a point where thousands of individuals exchanged methods of successfully acquiring religious exemptions (Mansoor, 2021). In the same article, Rocco mentioned how he used to be the admin of a Facebook group called “Writing Religious Exemptions for Vaccine Mandates Private Public Employers” (Mansoor, 2021). He explains that the sole purpose of this Facebook-based group is to publicize types of religious exemptions for the workplace and provide examples of letters resulting in gaining exemptions.

The ambiguity of religious exemptions stems from the definition of “religion.” The definition of “religion” incorporates not only structured religions, but also includes the notion of an “ethical vision” and the “moral compass” of an individual (Feil, 2000). Therefore, it is difficult to tease out religious exemptions based on their sincerity. Further, Title VII of the Civil Rights Act of 1964, prohibits religious discrimination in the workplace (The United States Department of Justice, 2021). As part of their “religious beliefs,” many individuals refuse to get the vaccine.

The exploitation of religious exemptions to avoid getting the COVID-19 vaccine is alarming and unfortunate since it is considered the primary weapon against the deadliest modern-day pandemic the world has witnessed. It holds promise to halt the spread of the COVID-19 virus, control the pandemic and facilitate the return to normal social and economic life. Yet, the ethical dilemma in mandating the vaccine lies in establishing the balance between individual autonomy and sovereignty versus collective beneficence and the well-being of the public. COVID-19 vaccines have become readily available to the public, yet disputes remain as to the appropriateness of mandating them, including legally required vaccinations in the workforce and for school admission (Amin et al., 2012). The essence of the ethical argument refuting the vaccine revolves around how all vaccines against COVID-19 were approved with emergency use authorization (EUA) (Sween et al., 2022). Mandating the COVID-19 vaccines under EUA is ethically problematic since it requires fewer safety measures and scientific data as to their effectiveness, compared to the requirements necessary to obtain Biologics License Application (BLA) approval is the FDA’s standard “full approval” mechanism for biological products such as vaccines (Sween et al., 2022). In other words, vaccine mandates under EUA and less than robust clinical trials not only undermine the confidence of the public in the measure, but also violate the federal human subject protection code (United States Department of Health & Human Services, 2021). However, this argument was called into question on August 23, 2021, when the Pfizer vaccine obtained BLA authorization.

Traditional medical ethics are centered on four main ethical doctrines illustrated by Beauchamp and Childress: autonomy, beneficence, non-maleficence, and justice (Beauchamp & Childress, 2019). The overriding ethical principle driving public health is protecting the populace's welfare over individual liberties. Therefore, traditional ethical frameworks are not suitable for public health initiatives. Public health ethics mainly emphasizes collective beneficence, nonmaleficence and justice of the population as the sole goal of this principle. This

community-centered approach venerates communal benefits over individual autonomy. For instance, mandating COVID-19 vaccines is rationalized under public health ethics since the vaccine is effective in protecting the most vulnerable groups of the population such as the elderly against the COVID-19 virus (Koff et al., 2022). However, the goal of COVID-19 vaccines is to reduce the morbidity and mortality of individuals based on existing data (Sween et al., 2022). Therefore, mandates to protect individuals are not ethically acceptable under public health initiatives as they are solely justified to prevent harming others.

As of March 18, 2022, a remarkable 557 million shots have been given in the last few short months, fully vaccinating about 217 million Americans, however, vaccination rates have recently plateaued since that time (CDC, 2022b). About 65% of eligible United States residents are fully vaccinated, and the rate of new vaccinations has fallen radically since the summer of 2021. Vaccine refusal has thwarted the eradication of the disease and led to a new surge of COVID-19 cases. An essay written by Saint-Victor and Omer (2013) indicates this dynamic is not exclusive to our country or our political minute. The authors note that administering a vaccine is significantly less complicated and convoluted than many other public health initiatives. They explained, “Unlike other methods of infectious disease prevention, vaccines do not typically require drastic and costly changes in human behavior, sanitation practices or sexual networks” (Saint-Victor & Omer, 2013, p. 2). With infection and death rates waning in recent months, people become less concerned about receiving the vaccine. In the meantime, adverse effects from the vaccine have drawn public attention, raising doubts and fears about receiving it. The researchers add that the “disappearance of a disease from the public eye creates a paradox whereby the success of a public health campaign (widespread vaccination and disease prevention) becomes a serious obstacle to the campaign itself” (Saint-Victor & Omer, 2013, p. 3). One unique exception to this was the worldwide effort to eradicate smallpox that began in the 1960s and was successful within three decades. Saint-Victor and Omer underscored that the effectiveness of this campaign can be partly attributed to the nature of the disease itself. Smallpox manifests by the presence of hideous and visible lesions, making it hard for societies to remain oblivious to its existence. However, the absence of such lesions hinders the vaccination rate in the world.

Vaccination rates as well as the numbers of individuals, who are fully vaccinated, continue to rise, however, remain uneven across the nation, with unvaccinated people at predominantly high risk of developing severe illness that could lead to death. Distinct patterns have emerged showing major fault lines that divide the vaccinated and the unvaccinated, which are age, race and ethnicity. Younger people tend to be less likely to be vaccinated than their elders are. According to COVID Data Tracker by the CDC, as of March 19, 2022, 62% of people ages 18 to 24 are fully vaccinated. By comparison, 91% of Americans ages 50 to 64 and 85% of individuals aged 65 to 74 are vaccinated (CDC, 2022c). That is partially because of how vaccines were released to the public as the government prioritized older adults to receive the vaccine due to their high risk of developing severe illness. Young adults were not eligible to receive the vaccine until April of 2021 (Baack et al., 2021). In an analysis conducted by the CDC, the researchers investigated a nationally representative sample of 2,726, including 18 to 39 years old because the vaccination rate among this age group happens to be the lowest (Baack et

al., 2021). The study also found that one-fourth of the participants conveyed that they would probably not or certainly not get vaccinated against COVID-19 (Baack et al., 2021). The investigators examined that among the participants who expressed probably or certainly not getting the vaccine, 56% expressed their concern about possible adverse effects of the vaccine while 57 % did not trust the vaccine. More remarkably, 36% of those participants verbalized they did not believe they needed the vaccine as they were young and healthy (Baack et al., 2021). The results of this study reveal that trust in the safety and efficacy of COVID-19 vaccines was a crucial element in the decision-making process among adults aged between 18 and 39 years. The report also proposed potential interventions to increase vaccination coverage among this age group. Their measures focused on ensuring that COVID-19 vaccines are convenient and readily available in locations where young adults aged between 18 and 39 years live and work to improve vaccination intent and coverage (Baack et al., 2021). The writers cautioned that findings were intended to serve as national approximations, not to be generalized at state or local levels, as they did not incorporate an investigation of geographic variances.

A surprising finding of the study lies within the fact that “among adults aged 18–39 years, those who were younger, were non-Hispanic Black, had lower incomes and educational attainment, had no health insurance, and lived outside of metropolitan areas had the lowest reported vaccination rates and intent to get vaccinated” (Baack et al., 2021, p. 929). The other deep fault line that divides the vaccinated and the unvaccinated is race and ethnicity. Since the vaccine became available to the public, the Black and Hispanic communities have been less likely than their Asian and White equivalents to receive the vaccine (Ndugga et al., 2022). A look at the CDC reports may indicate otherwise. The CDC reports are, however, an estimate of the percentage of people in each racial and ethnic group who reported receiving at least one dose of a COVID-19 vaccine at the national level only. While the CDC’s reports offer the number of vaccinated people at the federal level, there are significant variances in statistics, making it difficult to recognize the true vaccination coverage based on the racial and ethnic composition of the United States population. The CDC has not published state-level or local-level data on the racial and ethnic composition of people who are fully vaccinated or received at least one dose of a COVID-19 vaccine (Ndugga et al., 2022). In the latest report on COVID-19 vaccinations by race/ethnicity, Ndugga et al. (2022) indicated that across 42 states, 64% of Hispanic, 84% of Asian, and 62% of White people had received at least one COVID-19 vaccine dose, compared to the rate for Black people which is 57%. Thus, the CDC data is not applicable to the entire nation’s population.

The racial gap in vaccination rates has been shrinking and even has reversed for Hispanic people. In the March report from the Kaiser Family Foundation on COVID-19 vaccination by race/ethnicity, Ndugga et al. (2022) state that in three months, Black and Hispanic people’s vaccination rates had dramatically increased compared to their White counterparts. Despite progress in narrowing the racial disparities, the continuing gap in vaccination rates underscores the inequalities among different ethnic and racial groups.

### **Purpose**



The primary purpose of this research is to examine the factors influencing vaccine decision-making among faculty, students and staff at a public university in the United States.

## Methods

A survey methodology was utilized in this study to examine factors influencing vaccine decision-making in a public university community. Approval to conduct the study was granted by the university institutional review board for the protection of human participants. Participants were voluntarily invited to participate in the study via email. The aims, purpose and method of data collection were described. In addition, potential subjects were informed that demographic information regarding gender, race, ethnicity and role at the university would be collected. Potential subjects were informed that they may withdraw from the study at any time without penalty or retribution from the researchers or anyone in the campus community. They were also notified that they were only required to answer questions 5-12 on the survey and answering questions 1-4 was optional (see *Figure 1* below). Open-ended questions were also utilized in the survey to allow participants to respond in their own words.

1. How would you describe yourself?
  2. Are you a faculty member, staff member or a student at FSU?
  3. If you are a faculty member, in what area do you teach?
  4. If you are a staff member, what office or department do you work in?
  5. If you are a student, in what area are you seeking a degree?
  6. If you are a student, what year are you in?
  7. What is your Covid-19 vaccination status?
  8. Do you agree with the Covid-19 vaccine mandate?
  9. Regardless of your vaccination status, did your political views or affiliation influence your decision whether or not to get COVID-19 vaccine?
  10. Please explain your reason(s) for your answer to question 9
  11. Regardless of your vaccination status, was/is there any moral position(s) you hold that influenced your decision whether or not to get COVID-19 vaccine?
  12. Please explain your reason(s) for your answer to question 11
  13. Regardless of your vaccination status, did your personal or religious beliefs influence your decision whether or not to get COVID-19 vaccine?
  14. Please explain your reason(s) for your answer to question 13
  15. Is there anything you would like to add that you were not asked about in relation to your vaccination status?
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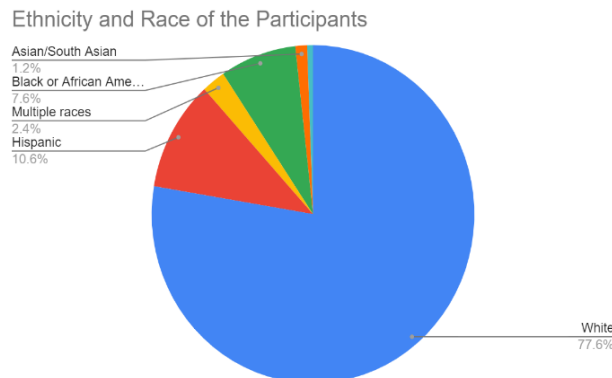
*Figure 1. Survey questions.*

The inclusion criteria were comprised of: persons who were either female or male, between the ages of 18-100; members of the university community such as undergraduate or graduate students; faculty and staff who are either full-time or part-time; and nontraditional students. Non-university community members and university community members under the age of 18 were excluded. Potential participants from students, faculty and staff were emailed and invited to participate in the study. The researcher applied for and received approval to conduct the study from the IRB of the university. Potential subjects were to answer a Google Forms

survey. Survey responses were disassociated from subjects' email addresses. The risks involved in the study have been minimized and were reasonable in relation to the anticipated benefits of the research. There was a minimal risk that answering the questions would cause increased stress, anxiety, triggering psychological symptoms and employability. The risk was minimized since the researcher did not collect identifiable information (name, email address, etc.) At the time of data collection, the researcher included resources to assist participants in coping with any distress, anxiety or triggering of psychological symptoms due to the completion of the survey such as the Crisis Hotline and the CDC website for coping with stress. The results from this research may be used to inform further research in this area. One of the major benefits of the study is the possibility of gaining a better understanding of the ethical, political and religious dilemmas participants face when deciding whether to be vaccinated, despite mandates to do so. Additionally, the findings may assist in the creation of a theoretical framework to guide decision-making on receiving vaccines in the future.

## Results

The study sample consisted of 173 students (see *Figure 3* below), 52 staff and 43 faculty who attend or work at University (N=267). In the sample, 93% of the participants were fully vaccinated (two doses of either Moderna or Pfizer or one dose of J&J) while the remaining 7% were not vaccinated. 77.6% of the participants reported being White while 22.4% reported being people of color. The non-white participants were divided into 10.6% Hispanic, 7.6% Black/African American, 2.4% Asian/South Asian and 1.2% multiple races (see *Figure 2* below).



*Figure 2*

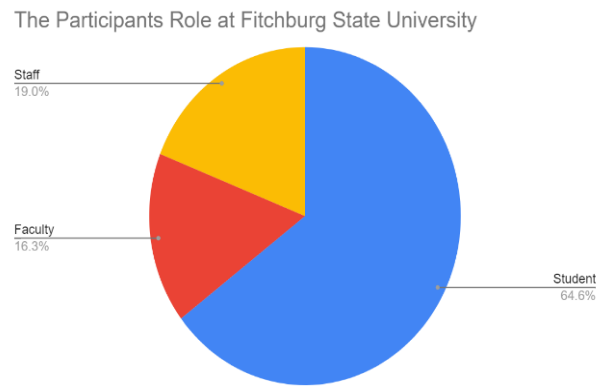


Figure 3

The results of the survey revealed that although 93% of the participants are fully vaccinated only 65% support mandating the vaccine while 35% oppose it (see *Figure 4* below). The findings highlighted the political, religious and ethical views. Almost 89% of participants suggested that their political ideologies or affiliation had not affected their decision while 11% said it affected their decision. Further, 67% of participants implied that their moral positions had impacted their decision while 33% identified they did not affect their decision. Lastly, nearly 42% of participants that their personal and religious beliefs shaped their decision to take the shot while 58% mentioned it did not (see *Figure 5* below).

8. Do you agree with the Covid-19 vaccine mandate ?

267 responses

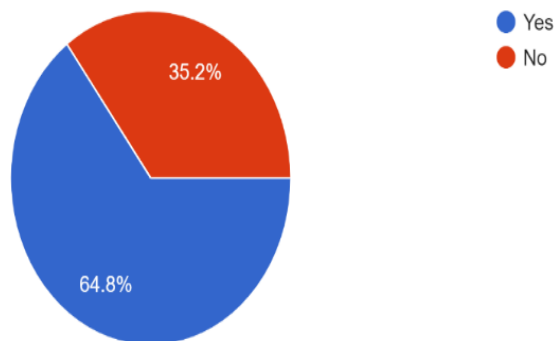


Figure 4

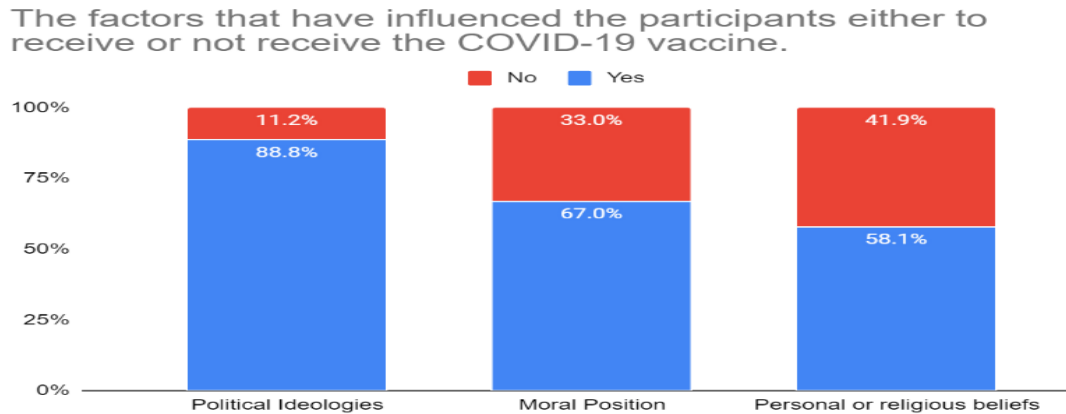


Figure 5

The researcher utilized *TAGUETTE* software to analyze participants' responses. The responses then were categorized into common themes, which were based on the overriding essence of the answers. The themes were divided into two large groups, those who were proponents and those who were opposed to the vaccine mandate. Three themes emerged during data analysis in both groups describing participants' reasons for either supporting the vaccine mandate or opposing it. The main three themes that surfaced for supporting the vaccine mandate included: mandating COVID-19 vaccines is the primary mean of mitigating the pandemic and facilitating the return of normal social and economic life, the vaccine should be mandated to protect the most vulnerable individuals of the population such as the aging population against the COVID-19 virus and the vaccine should be mandated to decrease the likelihood of dying from COVID-19. On the other side, the primary three themes that emerged were: mandating the vaccine is a breach of personal autonomy and likely has implications for privacy and confidentiality, doubts and mistrust of the vaccine's effectiveness in halting the spread of COVID-19 and worries and concerns about the adverse effects of the vaccine. Supporting statements from the participants were provided for each theme. The supporting statements are transcribed verbatim as direct quotes.

### Supporting the vaccine mandate:

#### 1. Mandating COVID-19 vaccines is the primary means of mitigating the pandemic and ensuring the return of normal social and economic life.

This theme indicates the feelings of many of the participants who support mandating COVID-19 vaccines. Participants consistently described that a return to normalcy could be achieved with mandating vaccines. One participant's narrative reflected this: "vaccination in society as a whole is important to stop or fight against the spread of diseases." Another participant added that he supports the mandate "to help stop the spread of covid." Moreover, many participants who support mandating COVID-19 vaccines viewed that "the decision of a vaccine to end a widespread disease should not be up for debate".

## **2. The vaccine should be mandated to protect the most vulnerable individuals of the population such as the aging population against the COVID-19 virus.**

The second theme reflects the participants' desire to protect vulnerable individuals in society by mandating COVID-19 vaccines. One participant expressed that: "As a citizen in a nation and community with other people, I felt morally obligated to do my part to keep others safe as well as myself. By getting vaccinated I was helping those that are immune compromised or older. It was moral to get the shot to help others." Another participant added that "there are also people who can't get vaccinated for a variety of medical reasons, so everyone who can, should do so to help those who can't and make society as a whole more resistant." Several participants described that refusing to adhere to the COVID-19 vaccines mandate to protect others is selfish, one stated, "not taking the vaccine when you're able to is selfish and shows just how individualistic our society is, people would rather think of themselves then the for the good of all."

## **3. Vaccines should be mandated to decrease the likelihood of dying from COVID-19.**

The third theme revolves around participants' wish to protect themselves from COVID-19. One participant stated, "Morally, I believe that protecting myself, my loved ones, and the general public by receiving the vaccine is my obligation if I am able to do so." Several participants acknowledged their belief in science and the COVID-19 vaccines' ability to decrease the lethality of the virus with phrases such as, "I believe in science and research. I got the vaccine solely to protect myself" and "I made my decision to get vaccination based on my desire to protect my personal health."

### **Opposing the vaccine mandate:**

#### **1. Mandating the vaccine is a breach of personal autonomy and likely has implications for privacy and confidentiality.**

The first theme that emerged from the data for participants who oppose mandating COVID-19 vaccines describes their notions about the vaccines. Many of them viewed the mandate as an unjustifiable invasion of autonomy and bodily integrity. In their responses, they emphasized on the essential right to make their own healthcare decision and bodily integrity. One participant expressed that, "it is morally unethical to take away one's personal, moral, ethical and religious freedoms." One participant said, "I feel as though I should not have to get any vaccines if I do not feel comfortable doing so or if I see no point in it." Other participants expressed similar views pertaining to mandating the vaccine. One stated "I don't agree with it being mandatory as we worked for so long with Covid patients without a vaccine. I felt like the vaccine should've been a personal choice."

#### **2. Doubts and mistrust of the vaccine's effectiveness in halting the spread of COVID-19.**

The second theme that emerged from the study describes the participants' deep skepticism about the vaccine's effectiveness in stopping the pandemic. One participant

mentioned that “As mandates continued after it was known the vaccine didn't stop the spread, it feels like a money grab. However, I wouldn't have gotten it anyway [because of the university mandate].” Another noted that despite the vaccine, “people are still getting Covid, and we are still wearing masks.” Other participants echoed those thoughts with expressions such as, “I simply believe that to force a mandate, especially for a vaccine that is so novel, does not have sufficient long-term data to support it, and that we actually know does not prevent the spread of disease.”

### **3. Worries and concerns about the adverse effects of the vaccine.**

This theme reflects the many participants' apprehension about the serious side effects of the vaccines. Several participants expressed their concerns regarding the risk of adverse effects associated with these vaccines. One participant's narrative reflected this: “I do not morally agree with putting a vaccination in my body that has been around for such a short amount of time and does not have long-term effects known or studied.” Some participants also stated their mistrust of the medical industry, one stated,

I believe that the medical industry is super corrupt, and this vaccine is bad news... but two family friends died directly after taking the vaccine and another friend was debilitated to the point of being paralyzed for life, losing his life as a neurosurgeon, his independence, and the life he once lived...plus the rise of birth defects since the vaccine has been rolled out.

Another participant's words are parallel to many respondents. Participants opposing the mandate indicated their fear of the unknown long-term side effects of the vaccines. One participant said:

The COVID-19 vaccine was only recently developed, and I have worries about any potential long-term side effects that could crop up in a few years. I don't think it should be mandatory to receive a vaccine that hasn't had the time to be tested for long-term effects ... I wanted to see side effects and all that before choosing to put it in my body voluntarily.

### **Conclusion**

There were several limitations in this study including: the utilization of a small nonrepresentative sample; potential bias among participants who responded to the survey; potential bias on the part of persons collecting data for the CDC and the unknown validity and reliability of the patient health data utilized in sources. Nonetheless, the findings are interesting to consider. First, the type and nature of ethical dilemmas are essential to consider when considering the health of the public versus the rights of individuals, especially when mandates are put forth during vaccination initiatives. With the continuing spread of COVID-19, mandating the vaccine was considered a key factor in controlling and halting the spread of the pandemic. The essence of the ethical dilemma with mandating the COVID-19 vaccine is the struggle between the health of the population and the right to individual liberty and autonomy. The researcher suggests adopting an ethical framework to adequately address ethical questions and dilemmas experienced by the public. Additionally, ethical considerations should also be accounted for when mandating persons to receive COVID-19 vaccines or, at the very least, be given more weight. Transparency about potential ethical issues as well as the latest science on vaccines and the epidemiology of benefit and harm is important in order to assist persons to make an informed decision. Further, effective communication on the part of legislators and

public health officials could go a long way to instilling trust as people decide whether to receive a vaccine.

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