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## Concerns with Taking the COVID-19 Vaccine

Kaela Bellamy

*Kennesaw State University*, [kaelabellamy@gmail.com](mailto:kaelabellamy@gmail.com)

Robert S. Keyser

*Kennesaw State University*, [rkeyser@kennesaw.edu](mailto:rkeyser@kennesaw.edu)

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## Concerns with Taking the COVID-19 Vaccine

**Kaela Bellamy and Robert S. Keyser (Faculty Advisor)**

**Kennesaw State University**

### ABSTRACT

This IRB-approved descriptive study provides an overview of the concerns associated with receiving a COVID-19 vaccination within the Kennesaw State University (KSU) community, an R2 university with over 41,000 students, and uses a survey to provide insight into how students, faculty, staff, and administrators are responding to the vaccinations for COVID-19, both available and unavailable, and their preferences. Our research findings indicate that: 1) The majority of survey responses at KSU intend to receive the vaccine, regardless of their concerns; 2) The majority of the participants who are either employed or provided an education by Kennesaw State University plan to get their vaccination for COVID-19 at one of the campus locations; 3) If given a choice, 32.17% preferred the Moderna vaccine, while 26.96% opted for Pfizer, and 37.39% of respondents preferred not to answer; and 4) The primary concerns of survey responses were associated with the direct side effects as well as the unknown long-term effects of receiving either vaccine..

**Keywords:** COVID-19 vaccine, Pfizer, Moderna, direct side effects, long-term effects, Kennesaw State University

### Introduction

The SARS-CoV 2 (COVID-19) pandemic has affected millions of people globally. Prior to the Fall 2020 semester, Kennesaw State University (KSU), which had over 41,000 students and has been classified as an R2 university, implemented a number of safety protocols following guidelines from the Centers for Disease Control and Prevention (CDC) as well as the University System of Georgia (USG). In December 2020, the Food and Drug Administration (FDA) approved both the Pfizer and Modera vaccines for the prevention of the coronavirus disease 2019 (COVID-19).

KSU is now a distributor of the COVID-19 vaccine to faculty, students, and staff. As more of the population in Georgia are eligible to receive the vaccine,

concerns are rising. The university is offering the Pfizer and Moderna vaccine, depending on what is available at the time. Personal preferences and opinions affect decisions regarding receiving the vaccine and which vaccine to receive. The growing concerns around both vaccinations are affecting personal opinions. At the beginning of the Spring 2021 semester, this IRB-approved descriptive study was designed to provide an overview of the concerns associated with receiving a COVID-19 vaccination within the KSU community and uses a survey to provide insight into how students, faculty, staff, and administrators are responding to the vaccinations for COVID-19, both available and unavailable, and their preferences. Discovering vaccination concerns will allow KSU to advertise vaccinations

effectively and continue to educate their students, faculty, and staff.

### Literature Review

Reports of the COVID-19 coronavirus first surfaced in December 2019 (Borowiak et al., 2020) but gained worldwide attention in January 2020 when the World Health Organization (WHO) declared the COVID-19 outbreak a “public health emergency of international concern” (Kennedy, 2020, p. 15). The COVID-19 disease is caused by a coronavirus called SARS-CoV-2.

Transmission is mainly through respiratory droplets and close contact with others, similar to how influenza is spread (Song, 2020). On average, symptoms occur about five days after exposure to the virus and almost all patients develop symptoms within 12 days of exposure to the virus (Wiersinga & Prescott, 2020). The human-to-human spread of COVID-19 has an estimated reproduction rate of  $R_0 = 2.28$ , which means each infected person will infect an average of 2.28 people (Williams & Cañon-Montañez, 2020). In February 2020, the Centers for Disease Control (CDC) provided guidelines on how to protect oneself and others (Coronavirus disease 2019 (COVID-19), 2019). On March 11, 2020, the Director-General of the World Health Organization characterized COVID-19 as a pandemic in his opening remarks at a media briefing (WHO, 2020).

A review of the literature reveals that people most susceptible to serious adverse effects of COVID-19, including mortality, are members of vulnerable populations: infants, the elderly, women, LGBTQ individuals, African Americans, prisoners, parent caregivers of children with intellectual disabilities, and college

students. Gale et al. (2020) in the United Kingdom (UK) concluded that SARS-CoV-2, or COVID-19, infection is uncommon in babies admitted to a hospital, although some babies are infected and a few are infected with serious symptoms (66 babies with confirmed SARS-CoV-2 in their study between March 1 – April 30, 2020). In a population-based study in the UK conducted by Forbes et al. (2020), their findings reveal that there is no evidence of serious harm from COVID-19 to adults living in households with children compared to those living in households without children. A separate study conducted in the U.S. (Weisberg et al., 2021) deduced that clinical manifestations of COVID-19 are associated with age. Whereas adults may develop respiratory symptoms leading to acute respiratory distress syndrome (ARDS) in the most severe form, children are largely spared from respiratory illness; however, they can develop a life-threatening multisystem inflammatory syndrome (MIS-C). In a prospective study of 49 children confirmed with SARS-CoV-2 in Shanghai, China, asymptomatic SARS-CoV-2 infection may be common in children, and viral RNA detected in the stool sheds in a similar pattern as in symptomatic cases (Cai et al., 2020). An American cohort study of children and adolescents under 21 years of age found that children confirmed with SARS-CoV-2 infection typically have mild symptoms that do not require medical attention (Hurst et al., 2020).

Although COVID-19 threatens the lives of children in general, the social and economic consequences are greater among female children. Spangaro et al. (2013) cites that women and girls are disproportionately affected in times of conflict and crisis. Previous epidemics

have shown that violence against females can increase in scale due to social and economic consequences, as shown during the Ebola epidemic (Onyango et al., 2019). In a prospective study involving 764 female patients in Poland, Fuchs et al. (2020) report that the COVID-19 pandemic affects many different aspects of human health, including quality of sexual lifestyle and frequency of intercourse, such that certain relationships between partners declined and levels of stress and anxiety increased. Potter et al. (2020) reveal that perceptions of COVID-19 threat were greater among both lesbian and bisexual women versus heterosexual women, which could be explained by either knowing someone who had been diagnosed with COVID-19 or by their perception that their workplace put them at risk of contracting COVID-19.

COVID-19 increases levels of stress and anxiety for many women, especially those who are also included in other vulnerable populations. For example, compared to heterosexual women, LGBTQ female children are at an even higher risk of anxiety and stress. LGBTQ youth are at a disproportionate risk for depression (Russell & Fish, 2016). Woznicki et al. (2020) report that high *parasocial relationship* strength—one-way relationships with LGBTQ media personalities on platforms such as YouTube—weakened the associations between family support and loneliness and between loneliness and depression. Two lifestyle casualties of the COVID-19 lockdowns in the LGBTQ community suggested by Musto (2020) include the loss of personal touch (i.e., interactions with others and spontaneity) and solitude (i.e., working from home, shopping online, and watching movies alone). Goldbach et al. (2020) suggest the use of *resilience* through increasing social

support, community connectedness, and engagement in provider-guided and self-guided distress coping interventions, as a means to buffer the impact of COVID-19 pandemic concerns among the LGBTQ community.

In addition to age, gender, and orientation, ethnicity can increase COVID-19 susceptibility. African Americans experience disproportionately high rates of infection and mortality relative to other populations in the United States (Kemp et al., 2020; Reyes, 2020). Counties with higher proportions of African Americans have higher numbers of COVID-19 cases and mortalities, due in part to crowded living conditions, higher unemployment, lack of health insurance, and increased levels of chronic disease (Millett et al., 2020). Moreover, African Americans are more likely to be poor, be employed as ‘essential’ workers in low-paying service jobs, and experience poor physical health compared to other racial/ethnic populations in the U.S. (Yancy, 2020). The American Civil Liberties Union (ALCU) contends that African Americans are more likely to use public transportation in large urban areas which places them in closer contact with others resulting in an increased level of vulnerability to becoming infected with COVID-19 (FDA, 2020). Reyes (2020) attributes the overrepresentation of African Americans among confirmed COVID-19 cases and the number of deaths as a reflection of existing social inequalities tied to race, class, access to the health care system, and social exclusion (Kim & Bostwick, 2020). Gilmore (2020) suggests the primary driver of death disparities from COVID-19 among African Americans is economic inequality, which impacts where and how people live and the kind of community they have to exist within.

Guerrero & Orlowski-Scherer (2020) note that people of color are dying from COVID-19 at higher rates than white Americans, with African Americans dying at rates three times greater than their share of the population.

Systemic issues in the U.S. are affecting more than the COVID-19 rates in the African American population. The pandemic has revealed systemic problems in U.S. prisons and jails, such as rampant overcrowding, an aging population, and a population demonstrating high rates of underlying health conditions, which are triggers for prisoners suffering from severe illness or mortality from COVID-19 (Wang et al., 2020). Further, many prisoners live in crowded dormitories with common toilets and showers and, as such, are unable to follow the most basic social distancing or hand-washing practices recommended by the Centers for Disease Control (Parloff, 2020). As a result, advocacy groups, public health experts, and lawmakers have called on government officials for the early release of inmates, particularly non-violent offenders, to free up space in prisons and jails in order to prevent the potential for a rapid spread of COVID-19 (Newman, 2020).

Like confinement in jails, confinement in homes has played a large role in the COVID-19 pandemic. In an international cross-disciplinary online survey, findings reveal that social and physical inactivity, triggered by home confinement during the COVID-19 pandemic, was associated with lower mental and emotional well-being (Ammar et al., 2020). Hamblaw et al. (2021) report distraction and acceptance are the most common coping strategies, and that positive reframing is the most beneficial coping strategy to mitigate the negative mental health effects of COVID-

19. For parent caregivers of children with intellectual disabilities, mental health problems were exacerbated when providing care in households with more severe challenging behavior and greater financial pressures, while also experiencing lower levels of social support compared to parents of children without intellectual disabilities (Willner et al., 2020).

Caregivers include those caring for their children as much as it includes those caring for the older adult population. Andrew et al. (2020) report that older adults have been disproportionately affected by the COVID-19 pandemic, particularly, in Long-Term Care Facilities (LTCFs), due to varying degrees of frailty, vulnerability, and resilience among older people, which makes them vulnerable to poor health outcomes. Further, among the elderly LTCF residents, a nutritional deficit combined with advanced age and the presence of chronic health conditions, such as hypertension, increases the vulnerability to a severe case of COVID-19 (Araújo et al., 2021). The effects of COVID-19 have led to an increase in mortality rates among the elderly, who are at an increased risk of a weaker immune system and comorbidities (Duru, 2020). During hospitalization, significant functional decline is attributed to severe muscle weakness and atrophy among the elderly diagnosed with COVID-19 infection (Sagarra-Romero & Viñas-Barros, 2020). In a study of elderly people, researchers have discovered that COVID-19 safety measures (Heidinger & Richter, 2020) and the digital divide (Martins Van Jaarsveld, 2020) have a negative impact on loneliness, a risk factor for physical and mental illness.

Issues that have surfaced on college campuses during the COVID-19

pandemic include addressing the needs of college students with special needs (Gould, 2020), managing the mental health of students (Aufderheide & Gondles, 2020; Son et al., 2020), protecting the safety and well-being of the student LGBTQ+ community (Weissman, 2020; Wood, 2020), and the effects and added responsibilities absorbed by the faculty (Alexander, 2020). College campuses have a large, diverse, and vulnerable population that is affected by COVID-19. LGBTQ, African American, women, elderly, young student, and caregiver populations all have one thing in common: they are all a part of college campuses across the world and a part of KSU.

### Methodology

The data collection method was an online survey that was created using Qualtrics® XM (see Appendix 1) and then posted in Kennesaw State University's email newsletter *KSU Today*, so students, faculty, staff, and administrators that comprise the KSU community could complete it at their own will. The survey consisted of nine questions, including eight multiple-choice questions and one free-response question. All questions were directed towards the general KSU population and were focused on subjects that pertained to receiving the COVID-19 vaccine and concerns regarding the currently available vaccines: Pfizer or Moderna. The following four research questions (RQ) will be explored:

**RQ1:** When students, faculty, staff, and administrators become eligible for the vaccine, do they intend to receive it?

**RQ2:** If one chooses to take the vaccine, where do they intend to take it?

**RQ3:** If given a choice of vaccines, which

one will students, faculty, staff, and administrators choose: Pfizer or Moderna?

**RQ4:** What concerns do participants have, if any, with taking the COVID-19 vaccine?

At the end of the survey period, Qualtrics® XM generated a report with all responses—131 of which were used to conclude the findings of the research. A response is considered useful if it contributes to the research in any way. To interpret the responses, descriptive statistics generated by Qualtrics® XM were used to analyze the answers to the multiple-choice questions while the answers to the free-response questions were used to provide more detailed insight for the researchers.

The demographic composition of participants in this study is quite broad. Of the 125 responses to Q6, "Please select your Age Group," Table 1 shows 24% are in the 18-39 age group. There were 48.8% in the 40-59 age group, and 26.4% in the 60 and over age group.

**Table 1.** *Demographic Composition by Age*

#	Answer	%	Count
1	18-29	4.00%	5
2	30-39	20.00%	25
3	40-49	19.20%	24
4	50-59	29.60%	37
5	60-69	23.20%	29
6	70-79	3.20%	4
7	80+	0.00%	0
8	Prefer not to answer	0.80%	1
	Total	100%	125

Further, Table 2 reveals that out of the 125 responses, most participants identified as White/Caucasian (80%), followed by

Prefer not to answer (6.40%), Black/African American (5.60%), Asian (4.80%), and Hispanic or Latino (3.20%).

**Table 2.** *Demographic Composition by Race and/or Ethnicity*

#	Answer	%	Count
1	American Indian or Alaskan Native	0.00%	0
2	Asian	4.80%	6
3	Black/African American	5.60%	7
4	Hispanic or Latino	3.20%	4
5	Native Hawaiian or other Pacific Islander	0.00%	0
6	White/Caucasian	80.00%	100
7	Prefer not to answer	6.40%	8
	Total	100%	125

Table 3 reveals that 92.80% of respondents identified as either Staff, Faculty, or Administrator, and 7.20% of

respondents to this question identified as either Student, Other, or Prefer not to answer.

**Table 3.** *Demographic Composition by Role at KSU*

#	Answer	%	Count
1	Student	3.20%	4
2	Staff	48.00%	60
3	Faculty	36.80%	46
4	Administrator	8.00%	10
5	Other	1.60%	2
6	Prefer not to answer	2.40%	3
	Total	100%	125

Table 4 reveals the demographics based on gender. Most of the participants are women, which does affect the responses to the research questions. Although there is not a diverse range in

gender, there is one person that identified as “other”, implying that we had at least one participant who is in the LGBTQ community.

**Table 4.** *Gender*

#	Answer	%	Count
1	Woman	81.60%	102
2	Man	16.80%	21
3	Prefer not to answer	0.80%	1
4	Other	0.80%	1
	Total	100%	125

Demographics heavily affect the research because they identify the vulnerable populations that are in the KSU community. The various populations should be taken into consideration when analyzing the results and reaching conclusions.

### **Analysis/Results**

At the end of the survey period, Qualtrics® XM provided the survey responses to the free-response questions as well as descriptive statistics for the

multiple-choice questions. Considering both the multiple-choice questions and the free-response question, a full analysis of students, faculty, staff, and administrators’ decisions and perceptions of the Pfizer and Moderna COVID-19 vaccines was conducted based on a total of 132 total responses, of which 131 responses were found to be useful. One response was not useful because the participant opted out of the survey on the first question. Participants were informed that they could opt out of the survey or



skip questions without consequence.

**RQ1:** When students, faculty, staff, and administrators become eligible for the vaccine, do they intend to receive it?

In response to Question 1, Table 5 reveals that 80.0% intended to or had

already taken either the Pfizer or Moderna vaccine, 4.0% did not intend to receive the vaccine, either due to their concerns or because they did not want the vaccine, and 16.0% of respondents remained undecided. Students, faculty, staff, and administrators had some remaining concerns that are crucial to their decision.

**Table 5.** Responses to RQ1: When you become eligible, do you intend to take the COVID-19 vaccine?

#	Answer	%	Count
1	Yes	80.00%	100
2	No	4.00%	5
3	Undecided	16.00%	20
4	Prefer not to answer	0.00%	0
	Total	100%	125

**RQ2:** If one chooses to take the vaccine, where do they intend to take it?

Table 6 indicates that, whereas 81.60% of participants intended to receive the vaccine from KSU, 3.20% chose not to

take the vaccine, and 4.0% preferred not to answer. Many of the participants that are either employed or provided an education by KSU, however, planned to get their vaccination for COVID-19 at one of the campus locations.

**Table 6:** Responses to RQ2: If you take the COVID-19 vaccine, where will you take it?

#	Answer	%	Count
1	At KSU	81.60%	102
2	Your pharmacy	3.20%	4
3	Your healthcare provider	8.00%	10
4	Will not take the vaccine	3.20%	4
5	Prefer not to answer	4.00%	5
	Total	100%	125

**RQ3:** If given a choice of vaccines, which one will students, faculty, staff, and administrators choose: Pfizer or Moderna?

Pfizer and Moderna were the only two vaccines currently being offered at

Kennesaw State University. KSU did not specify which vaccine will be administered in advance because they were unaware of which vaccine will be available at a participant's scheduled appointment. When given a choice,

Table 7 revealed, 32.17% of participants chose Moderna, while 26.96% opted for

Pfizer. Notably, 37.39% of the participants preferred not to answer.

**Table 7.** Responses to RQ3: If given a choice of vaccines which do you prefer?

#	Answer	%	Count
1	Pfizer vaccine	26.96%	31
2	Moderna vaccine	32.17%	37
3	Will not take the vaccine	3.48%	4
4	Prefer not to answer	37.39%	43
	Total	100%	115

**RQ4:** What concerns do you have, if any, with taking the COVID-19 vaccine?

When directly asked if the participants had any concerns, 52 responses said yes, according to Table 8. Even those who are choosing the Pfizer or Moderna vaccines had remaining worries. Ultimately, according to our sample, most of the population at KSU intended to receive the vaccine, regardless of their concerns. At least four participants were directly concerned about the mRNA technology that was present in both the Pfizer and

Moderna vaccines. Two participants mentioned that they intended to wait to receive a vaccine that was not provided to the public at the time of this survey (Johnson & Johnson or Astra Zeneca). Johnson & Johnson was awaiting approval and was approved within weeks after the survey was conducted. Astra Zeneca was available in other countries, but not the United States. From our results, it was apparent that there are many concerns, but people were making their choices according to what they felt is personally best for them.

**Table 8.** Responses to RQ4: Have you any concerns about taking the COVID-19 vaccine?

#	Answer	%	Count
1	Yes	41.60%	52
2	No	48.80%	61
3	Not sure	8.00%	10
4	Prefer not to answer	1.60%	2
	Total	100%	125

Responses to the free-response question, Q5, are summarized in Table 9. Among the 41.60% of participants who expressed concern with taking the COVID-19 vaccine (from Table 8), 88 concerns were shared in the survey. The

primary concerns pertained to both the direct side effects experienced after taking the vaccine followed by long-term side effects. Some of the direct side effects listed were allergic reactions, aches, and pains (27.27%). Long-term effects

(27.27%) were followed by not enough information was known (i.e., lack of testing, conflicting information, etc.) (10.23%). Following the long-term effects and lack of information, the concerns were primarily with pregnancy, fertility, and effects on babies (7.95%), efficacy of the current vaccines (6.82%), and ethical concerns (4.55%). 15.91% mentioned concerns that did not have their own category, so they were listed as Other (i.e., trust, on-time availability of the vaccine, awaiting approval of a different vaccine, etc.).

According to the free-response question, Q5, eight participants were

concerned with the actual process of receiving the vaccine. The facility in which the vaccine was given could have played a part in their concern. Three participants voiced that they were concerned that their chosen location would not administer the second dose on time or have it available. One participant mentioned that they were concerned about not being able to pick the vaccine that they received because KSU was not able to specify in advance which will be available. Location was a determining factor for some to feel safe. Regardless, most of the participants chose to receive the Pfizer or Moderna vaccine at KSU when they became eligible.

**Table 9:** Responses to RQ4: What concerns do you have, if any, with taking the COVID-19 vaccine?

#	Answer	%	Count
1	Direct side effect	27.27%	24
2	Long-term effects	27.27%	24
3	Not enough is known (lack of testing, conflicting information, etc.)	10.23%	9
4	Pregnancy, fertility, babies	7.95%	7
5	Efficacy of vaccine	6.82%	6
6	Ethical concerns	4.55%	4
7	Other	15.91%	14
	Total	100%	88

Although 15.79% of participants expressed concerns regarding the need for more testing and research about the long-term side effects, only 11.11% of participants believed that the vaccine testing and production were rushed. One participant mentioned that they believed there was a microchip in the vaccine, and they were concerned about how that would have affected the future. Some mentioned they were unsure of how long the vaccine would be effective, while others believed it would have only protected against few strains of the coronavirus. There were four concerns about complications with their preexisting conditions, such as heart and autoimmune diseases.

Also shown in Table 9, 7.95% of concerns raised dealt with fertility, pregnancy, and babies. One response mentioned that they feel the effect on fertility and pregnancy is not discussed enough and should have been a priority in the testing of the vaccinations. When testing the vaccinations, 3.53% believed that there was unethical testing, including testing on embryos. Their concern was revolved around the process of how the vaccine was produced and tested, rather than the direct effects.

## Discussions

An IRB-approved descriptive study was conducted by distributing a survey among the KSU community, which consists of students, faculty, staff, and administrators to determine the level of interest in taking the available vaccine when people become eligible and to identify concerns with taking the COVID-19 vaccine. The following research questions were explored, along with their respective conclusions:

**RQ1:** When students, faculty, staff, and administrators become eligible for the

vaccine, do they intend to receive it?

Most of the respondents at KSU intend to receive the vaccine, regardless of their concerns.

Considering the passion around the debate of the vaccine, it is surprising that the majority of those who responded to the survey decided to receive the vaccine. The participants admit that there are concerns around the vaccine, but that does not stop them from receiving it. Based on demographics, a large portion of the participants was from a vulnerable population. For example, about 80% of the participants were women (see Table 4). Vulnerable populations have different reasons to be worried than nonvulnerable, like fertility for women. That being said, it is clear that possible long-term side effects are not preventing most from receiving the vaccine.

**RQ2:** If one chooses to take the vaccine, where will they intend to take it?

Most of the participants that are either employed or provided an education by KSU plan to get their vaccination for COVID-19 at one of the campus locations. KSU has offered the vaccine to students, faculty, staff, and administrators as they became eligible to receive it. Although the university offered the Moderna and Pfizer vaccine on campus, other options remain, including the participant's pharmacy and healthcare provider.

If a participant chose not to receive it on campus, there could have been many factors. The participant could have been unsure, chosen to receive the vaccine in another manner, had other concerns, or possibly awaited the availability of a different vaccine. KSU made it clear that it offered the Moderna and Pfizer vaccine, but it also made it known that you would not get the option of which vaccine you

would like. The vaccine you received would depend on what was available and the location that you attended. If a student, staff, or faculty member wanted to receive a specific vaccine, it would have been in their best interest to receive it from a different provider that could guarantee which vaccine they received.

KSU updated students, faculty, staff, and administrators through frequent email communication and announcements, which allowed the KSU community to continually become aware of new knowledge as the pandemic evolved. This could have explained why a high percentage of the participants from the same population intended on receiving their vaccine through the school.

**RQ3:** If given a choice of vaccines, which one will students, faculty, staff, and administrators choose: Pfizer or Moderna?

If given a choice, 32.17% preferred the Moderna vaccine, while 26.96% opted for Pfizer, and 37.39% of respondents preferred not to answer (see Table 7). Those that preferred not to answer indicated that they may have been unsure, did not have enough information, or were awaiting FDA approval of a different vaccine, according to some concerns voiced in the free-response question.

Although about 60.0% of respondents had an opinion on which vaccine they would receive, it is clear that not all of them were able to choose since 81.20% were planning on receiving the vaccine from KSU (see Tables 5 and 6). In other words, those that are receiving their vaccine from KSU will have to be educated on all vaccines since they will be given what is currently available rather than picking the one that they would like. For some of the vulnerable populations, that could have contributed to their

concerns. They will have to understand all vaccines and the concerns that come with them. For example, women who are concerned with fertility may have rather picked a vaccine that has already done some studies on fertility rather than one who has not researched it yet.

**RQ4:** What concerns do you have, if any, with taking the COVID-19 vaccine?

The primary concerns with taking the COVID-19 vaccine are the direct and unknown long-term effects followed by not enough information is known (e.g., lack of testing, conflicting information, which vaccine will be administered) about current vaccines and their future effects. It is important to note that vulnerable populations have more concern, indicated by the demographics of the participants, with taking the vaccine. The long-term effects could be a range of problems, including fertility issues or how it affects babies. Future and present parents do not know what effects the vaccination will have on their children. Other populations, such as the elderly, may be affected more by the side effects due to their vulnerability in their immune system. Some of the vulnerable populations believe there are ethical concerns with how the vaccine was tested and is being produced.

Vulnerable populations help make up the KSU community. It is important to recognize the effects that the COVID-19 pandemic has had on KSU and continues to have. Previous researchers examined individual vulnerable populations and how COVID-19 affected them, but this study looked at findings for a population full of vulnerable people and examined their response to the recommended way to stay safe from COVID-19. This study recognizes the overlap of vulnerable populations and tries to understand

opinions towards the response to COVID-19. Other studies, including some referred to in the literature reviews, focused on the period before the vaccine was available, while this study focuses on the next step in the pandemic where possible solutions are being proposed. While the concerns regarding the vaccine within the KSU community were explored, there was also discussion of how they related to various vulnerable populations. Exploring the opinions on receiving the vaccine is important to help KSU and the surrounding community understand how they can best respond to the population and aid their peers.

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## Appendix 1 – Qualtrics® Survey

### IRB-FY21-388

#### Concerns With the COVID-19 Vaccine

In this survey, we would like to collect some feedback about your concerns, if any, with taking the COVID-19 vaccine. Your participation in the survey is completely voluntary and anonymous.

1. When you become eligible, do you intend to take the COVID-19 vaccine?

- Yes
- No
- Undecided
- Prefer not to answer

2. If you take the COVID-19 vaccine, where will you take it?

- At KSU
- Your pharmacy
- Your healthcare provider
- Will not take the vaccine
- Prefer not to answer

3. If given a choice of vaccines, which do you prefer?

- Pfizer vaccine
- Moderna vaccine
- Will not take the vaccine
- Prefer not to answer

4. Have you any concerns about taking the COVID-19 vaccine?

- Yes
- No
- Not sure
- Prefer not to answer

5. If you have concerns about taking the COVID-19 vaccine, please list your concerns in the box below.

Next, we would like to collect some demographic data.

6. Please select your age group.

- 18-29
- 30-39
- 40-49
- 50-59
- 60-69
- 70-79
- 80+

7. Gender

- Woman
- Man
- Other
- Prefer not to answer

8. Race and/or Ethnicity

- American Indian or Alaskan Native
- Asian
- Black/African American
- Hispanic or Latino
- Native Hawaiian or other Pacific Islander
- White/Caucasian
- Prefer not to answer

9. Role at KSU

- Student
- Staff Faculty
- Administrator
- Other
- Prefer not to answer

This concludes the survey. Thank you for

your participation!