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Investigating Differing COVID-19 Vaccine Attitudes Within Families

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**INVESTIGATING DIFFERING COVID-19 VACCINE ATTITUDES WITHIN
FAMILIES**

By

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A Senior Honors Thesis

Through the Shackouls Honors College in Conjunction with the Provost Scholars Program

and

The Department of Communications with the supervision of

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Mississippi State, Mississippi

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Abstract

The dynamic between the young adult and their immediate parent(s) is unique as it is in limbo between childhood and the young adult starting their own family. Although young adults can legally make their own vaccine decisions, parental influence can be a major factor in their decision making (Patel, Zochowski, Peterman et al., 2012). The aim of this study is to investigate the sociological phenomena behind the differing attitudes between family members on the topic of COVID-19 vaccination. As COVID-19 continues to wreak havoc on the health and stability of society, understanding the factors that influence vaccine attitudes can inform the ways communicators promote vaccine acceptance.

A Qualtrics survey was used to collect demographic and screening data; the survey screened for young adults aged 18-25 who have a different opinion on the COVID-19 vaccine than their family member(s). Out of the 73 survey respondents, 14 fit the selection criteria (N=14). Those who fit the criteria and agreed to be interviewed were invited to participate in a virtual WebEx interview (N=4). Interviews were analyzed thematically (Braun & Clarke, 2006) using NVivo. Four main categories were identified using the themes collected from the NVivo analysis: 1) Personal choice, 2) Job Influence/Pressure, 3) Politics, and 4) The novelty of the COVID-19 vaccine. Any disagreements that the participant had with their parents often included all four categories, and negative vaccine attitudes often coincided with each category, along with subcategories in religion, belief in one's own natural immunity, and the fear of vaccine side effects. There were few reports of severe arguments between the parent and the participant; most discussions were reported to be civil and respectful.

In this study, when vaccine attitudes varied within families, young adult children tended to be understanding of their parents' vaccine opinions and attitudes, and vice versa. Both parties

expressed a strong belief in personal choice, and those who accepted the COVID-19 vaccine understood the hesitancy over its novelty. Future research could address whether or not these respectful and understanding discussions between close individuals (such as a parent and child) could help promote vaccine acceptance.

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Introduction

The COVID-19 pandemic has irrevocably altered the health and function of the entire world. The pervasive effect that the pandemic has had on the US and the world cannot be overstated –millions of lives have been lost and countless others irreversibly damaged by physical and mental disabilities, along with the grief and isolation that accompanied quarantine and social distancing (Raveendran et al., 2021; Kontoangelos et al., 2020). While masking, social distancing, online meetings, and email discussions were effective in reducing the spread of COVID-19 (Bao and Huang, 2020), the invention of COVID-19 vaccines was revolutionary. All three vaccines showed promising results, with efficacy rates ranging from a 60-95% reduction in infection (Pilishvili et al., 2021, CDC 2020). However, in the US, the COVID-19 vaccines have become a widely discussed and polarized topic (Jiang et al., 2021). Efforts by the Centers for Disease Control and Prevention to promote vaccine uptake have been met with resistance, partially due to mistrust in the CDC’s messaging campaigns (Latkin et. al 2021). Due to the scope and damage of the COVID-19 pandemic, it is more important than ever to promote vaccinations within communities and globally. By understanding how individuals make decisions about the vaccine, how they view the vaccine, and how they discuss the vaccine with close family members, health communicators and sociologists can begin to understand the thought process behind those who will and will not receive the COVID-19 vaccine.

Although vaccination against COVID-19 has been a polarized topic, the vaccine has generally seen high rates of uptake, with 81.5% of US adults and children over the age of five receiving at least one dose of the vaccine (CDC Data Tracker). This data varies by region; for example, according to the Mississippi Department of Health, in Mississippi (which is the focus of this study) only 59% of adults and children over five have received at least one dose of the

vaccine. While many have opted into taking the vaccine, there are many who chose not to take the COVID-19 vaccine for a plethora of different reasons and factors. Vaccine uptake and opinions vary based on demographic data such as age (Monte, 2021), gender (Zintel et al. 2022; Thunstrom et al. 2021), and many other factors. Existing research has shown that COVID-19 vaccine hesitancy and more broadly vaccine hesitancy in general is associated with adults younger than fifty (Monte, 2021), those in lower socioeconomic brackets (Willis et al., 2021; Monte, 2021), those who identify as women (Zintel et al. 2022; Thunstrom et al. 2021), those who identify as African American or Black (Trujillo et al., 2021; Gurley et al., 2021), and those who have not received higher education (Monte, 2021; USC Center for Economic and Social Research, 2021). Political and religious beliefs also played a role in predicting vaccine acceptance vs refusal: Democrats and low religiosity are associated with increased vaccine acceptance, while identifying as Republican or Independent predicts vaccine hesitancy (Largent et al. 2020; Milligan et al. 2021).

Although research has been conducted on individuals' COVID-19 vaccine opinions, fewer studies have addressed the role that parents and family members play in this decision-making. Understanding this connection between a parent and a young adult child can provide insight into vaccine decision-making within families. Although there is not much research on the topic of the COVID-19 vaccine due to its novelty, the closest comparison can be made with the Human Papillomavirus (HPV) vaccine due to many children not receiving that controversial vaccine until adulthood. Existing literature shows that undoubtedly, parents play a major role in the HPV vaccine decision-making of young adult college students (Roberts et al., 2010; Hopper & Clippard, 2011; LaJoie et al., 2018). If the COVID-19 vaccine shows a similar trend, it would

be insightful to discover what factors would potentially cause the divergence in opinion between parent and young adult child.

Parents have significant influence over the medical decisions of their children under the age of eighteen, including regarding the COVID-19 vaccine (Grapensperger et al., 2020). This research project, however, investigates the sociological aspect of vaccine opinions that differ between parents and young adult children. At young adulthood, an individual is able to make their own decisions about their health, but typically still rely on their parents as a source of information and advice (Grapensperger et al., 2020). Developmentally, young adults also tend to feel as though they are “in-between” stages; they may still feel strong attachment to their parent, but the authority is not as present, and they have begun to accept responsibility for their actions and make their own choices (Arnett et al., 2014). If the parent and young adult disagree about a health decision, the discussions and potential disagreements that may occur could alter their relationship. It is also possible that these discussions do not alter the relationship, and although the parent and young adult disagree about taking COVID-19 vaccine, they may align strongly in most other COVID-19 vaccine related issues.

Therefore, the goal of this study is to further understand how parents and young adult children begin to disagree about the COVID-19 vaccine, and how their disagreement may have changed or affected their dynamic and discussions and relationship with one another. Through the thematic analysis of in-depth structured interviews, this study seeks to understand the role politics, media, and other outside influences play in the formation of an individuals’ opinion on the COVID-19 vaccine, and how those outside influences shape the dynamics between parent and young adult child. How much of a role does a parent’s opinion play in the decision making of a child that is no longer directly under their care? The information gathered from this study

can be used to provide necessary insight into the familial dynamics that affect vaccine uptake within communities and within the US as a whole.

Literature Review

Vaccine attitudes

Vaccine attitudes in the United State vary based on aspects of an individual's identity. Previous research has linked age (Monte, 2021), politics (Largent et al. 2020; Milligan et al. 2021), gender (Zintel et al. 2022; Thunstrom et al. 2021), religion (Milligan et al., 2021), socioeconomic status (Willis et al., 2021; Monte, 2021), and education (Monte, 2021; USC Center for Economic and Social Research, 2021) to vaccine attitudes, including hesitancy, acceptance, and refusal. Understanding the factors that contribute to an individual's vaccine attitudes can lay the groundwork for how these ideas are disrupted when a young adult develops an attitude towards the COVID-19 vaccine that differs from their parent's attitude.

Education level proved to be a significant factor in the development of vaccine attitudes. The University for Southern California (USC) Center for Economic and Social Research's "Understanding Coronavirus in America" tracking survey, run in California, showed that individuals who had a bachelor's degree were more likely to get vaccinated than those who had only received some college education, or high school or less. Similarly, a study run by the US census found that people who were less educated were less likely to receive the COVID-19 vaccine (Monte 2021).

Race, age, gender, and income were also associated with the vaccine attitudes in individuals. Although non-Hispanic White, Asian, and Hispanic adults reported similar levels of COVID-19 vaccine acceptance, vaccine uptake was significantly lower in Black populations. Vaccine hesitancy was also linked to a lower income level (<\$25k) and again linked to only some college education (Willis et al., 2021; Monte, 2021). Age was also reported to be

significantly linked to vaccine attitudes, with younger adults less likely to receive the COVID-19 vaccine than older adults (Monte, 2021). Additionally, a systematic review and meta-analysis found that women had lower vaccine intentions than men, while men were 58% more likely to accept the COVID-19 vaccine (Zintel et al., 2022; Thunstrom et al. 2021). Religion and politics also played a role in the vaccine intentions and attitudes of individuals. Those who identified as Republican or Independent were less likely to receive a COVID-19 vaccine, while Democratic party membership predicted greater acceptance of a COVID-19 vaccine (Largent et al. 2020; Milligan et al. 2021). Decreased religiosity was associated with greater acceptance of a COVID-19 vaccine as well (Milligan et al., 2021).

Beyond demographics and ideologies, decisions about whether to accept the COVID-19 vaccine are also based on individuals' perceptions of the vaccine itself. The vaccine's novelty and perceived lack of testing is an oft-cited reason for vaccine hesitancy. Vaccine hesitant individuals often express that they are afraid the vaccine is not safe due to the relatively short timeframe within which the vaccine was produced and tested (Pogue et al., 2020). Some of the most common concerns include fears about side effects, concerns over whether the vaccine offered effective protection, and concerns over a perceived lack of testing (Pogue et al., 2020; Thunstrom et al., 2021).

Vaccination attitudes vary based on a wide variety of reasons, many of which are specific to each individual person. Understanding the demographic and ideological differences between those who accept the COVID-19 vaccine and those who refuse it provides insight for this project.

Vaccine attitudes in college students

Because age and education level are significant factors in COVID-19 vaccine attitudes (Monte, 2021), it is worthwhile to understand the mindset of college students regarding this vaccine. Given the novelty of the COVID-19 vaccine and the relative newness of the illness itself, it will also provide some insight to assess the attitudes college students have towards other, similar vaccines (such as the influenza vaccine and the HPV vaccine). The goal of this section is to analyze the way students view the COVID-19 vaccine, along with other vaccines, and to investigate the demographic and ideological reasons behind their attitudes.

The general acceptance of the COVID-19 vaccine among college students is generally higher than others within their age group, with a 50-state survey of over 2100 students finding that 74% of students and 67% of anyone aged 18-24 having received at least one COVID-19 vaccine, (Trujillo et al., 2021). This number varies, however, based on school and region. For example, in one study of a Southern US University ($N=282$), nearly half of the student population (47.5%) reported hesitancy to receive the COVID-19 vaccine (Sharma et al., 2021). Although college students' attitudes towards the COVID-19 vaccine are generally positive, many factors contribute to their perceptions.

As with adults in general, the political views of college students were associated with their attitudes towards the COVID-19 vaccine. A survey found that Republican college students and unvaccinated students were less likely to approve of their university's COVID-19 vaccination policy (Trujillo et al., 2021), and a study on vaccine acceptance among college individuals ($N=282$) found that Republican Party political affiliation was associated with increased COVID-19 vaccine hesitancy (Sharma et al., 2021). Racial differences existed within the data as well, although the results are different: Hispanic students and White students were

less approving than Black students and Asian students, while in the general adult population, individuals identifying as Black or African American were less positive towards the COVID-19 vaccine (Trujillo et al., 2021). However, this may vary based on region. For example, Black students at a college campus in Massachusetts were much less likely to have received the COVID-19 vaccine than their White counterparts according to a survey of 454 students (Gurley et al., 2021). Further research investigating the role of the region by analyzing specific college campuses would provide more insight into how vaccine attitudes change based on location.

According to interviews conducted with college students in Philadelphia ($N=33$), college students held an overall positive attitude towards vaccination in general, even though they lacked knowledge about vaccines and did not prioritize vaccination (Sandler et al., 2020). However, according to two other studies, students expressed that they perceived the COVID-19 vaccine to be more important than the influenza vaccine (Grapensperger et al., 2020; Silva et al., 2021). The Grapensperger et al. (2020) study also showed greater intentions towards receiving the vaccine (91.6%) over the flu vaccine (76.0%). Grapensperger et al. also found that social norms and perceived importance of the vaccine were positively associated with participant's intentions to get a COVID-19 vaccine. Notably, participants also believed that young adults their age would be less likely to get the vaccine and would not consider vaccination important. These three studies show that students may not prioritize vaccination and do not believe others in their age group prioritize vaccination, and their peers influence their vaccine decisions and attitudes.

College students also reported similar reasons for vaccine hesitancy as the broader adult population. A questionnaire was given to University of Rhode Island students ($N=237$) in order to investigate vaccine hesitancy in college students. The results of the survey showed that the top

three reported vaccine-related concerns were safety, effectiveness, and limited information (Silva et al., 2021).

Vaccination attitudes among college students vary based on a wide variety of issues and demographic associations. While college students share some similarities with the broader adult population regarding COVID-19 vaccine attitudes, there are a few differences that help contextualize this study.

Parent influence on college student vaccine attitudes

Although peers and demographic/ideological factors play a role in the formation of a young adult's COVID-19 vaccine attitudes, parents are another potential factor. Young adults may be able to make their own health decisions legally, but parents likely still maintain influence over their decision-making. According to Grapensperger et al. (2020), parental advice had substantial influence on students' decision-making. While there is not much existing research on parental influence over student vaccine attitudes and decision making regarding the COVID-19 vaccine, studies have examined comparable vaccines such as the HPV vaccine and the influence parents have over their young adult children.

Roberts et al. conducted a study with a sample of female undergraduate students ($N=972$) at a large Midwestern state university. This study reported that participant's mother's approval of HPV vaccination was positively associated with vaccination status, meaning that these female students were more likely to have received the HPV vaccine if their mothers approved. Even though these women were all old enough to receive the vaccination without any form of parental consent, perception of their mother's approval was an important predictor of vaccination (Roberts et al., 2010). A similar study was conducted by Hopfer and Clippard (2011) using in-

depth qualitative interviews with 38 college women. The findings were almost identical: women who had the support of their parents and close family members were more likely to have received the HPV vaccine (Hopfer & Clippard, 2011). Another study showed the influence of parents over both male and female young adult children's HPV vaccine attitudes. In that study, a survey of Kentucky college students ($N=1200$) found that parental influence for vaccination was a strong predictor for vaccine uptake (LaJoie et al., 2018). All three studies found that the likelihood of HPV vaccination uptake is associated with parental influence; these results suggest that a similar phenomenon may occur with the COVID-19 vaccine.

Aims and Research Questions (RQ)

What little research exists about the role parents play on young adult vaccine attitudes does not address the COVID-19 vaccine. Most of the existing research focuses on the HPV vaccine, since unlike childhood immunizations, it is one of the few vaccines the child is old enough to legally make their own decisions. The COVID-19 vaccine is similar in that many young adult college students are currently deciding whether to take the COVID-19 vaccine. This paper attempts to partially address the role that parents may play in the decision-making and attitudes of young adults regarding the COVID-19 vaccine by analyzing what factors led to differing opinions between the two groups (parent and child). Vaccine attitudes are affected by many factors that vary by age group, and the goal of this paper is to understand the factors that lead to young adults forgoing the opinions of their parents and what types of discussions that disagreement leads to.

RQ1: What are the factors that influence young adults to diverge from their parent's opinions regarding the COVID-19 vaccine?

RQ2: What types of discussions do parents and young adult children have about the COVID-19 vaccine?

RQ3: What difficulties and conflicts, if any, arise due to a difference of opinion?

Methods

Participants

To recruit participants, a screening and demographic survey was sent via email to the Mississippi State University Department of Communication and the Pre-Health concentration email lists. The selection criteria were young adults aged 18-25 who had at least one parent or guardian whose opinion on the COVID-19 vaccine differed from theirs. A total of 73 survey responses were recorded and 61 responses were completed. Out of the 61 completed surveys, 24 respondents met the selection criteria. Out of the 24 respondents that met the selection criteria, 15 indicated that they would like to participate in a virtual interview. These 15 participants were contacted with the email addresses they provided and invited to participate in a virtual interview that would last no more than an hour. They were contacted once a week for three weeks and offered different time slots to interview each week. Out of the 15 participants that indicated they would be willing to interview, 5 responded to schedule an interview. Out of the five that scheduled an interview, a total of 4 participants completed the interview. Therefore, the final sample size was 4.

Survey

Measures

The full survey consisted of 29 demographic and screening questions. The first 17 questions were to collect demographic data. These questions asked about location (state), age, gender, ethnicity (Hispanic vs non-Hispanic), race, education level, political leaning (Republican, Democrat, Independent), religion, religiosity, marital status, dependents, and whether the

participant receives financial support from their parents. Demographic questions were pulled from several sources. Questions about demographic factors such as race, religion, marital status, education, etc. were pulled from the U.S. Census Bureau (American Community Survey, 2020; U.S. Census Bureau, 2021) and questions about gender were pulled from Pew Research Center (Amaya, 2020). The next set of questions asked about their parent's political leaning, religion, and religiosity which were also pulled from several surveys used by Pew Research Center (Tamir et al., 2020; Pew Research Center, 2021). The next few questions were more specific and asked whether or not the participant and their parent had received a dose of the COVID-19 vaccine. Some of these questions were also pulled from surveys used by Pew Research Center (Funk & Tyson, 2021), while others were specific to and created for this project. The final questions asked if the participant would like to be interviewed. The full survey can be found in the Appendix.

Procedures

The survey was created using Qualtrics and disseminated via email to college students attending Mississippi State University. First participants were asked to consent to their involvement in the study. The first set of questions asked about demographic data until Question 19. Question 19 asked whether or not the participant met the selection criteria (“Do you or at least one of your parents/guardians disagree on the COVID-19 vaccine?”). If the participant selected “yes” then they would continue to the next set of questions about their parents, but if they selected “no,” the survey would end. Participants were then asked if they would consent to an interview, and if they said “yes” then they were asked for consent for the interview’s video and audio to be recorded. If they said “no” then the survey would end.

Interview

Materials

The semi-structured interviews were conducted via the online conferencing software Webex. After an initial warm up phase of questioning (i.e. introductions, a few general questions regarding the participants majors, line of work, and future career plans), the participant was asked eight questions, which were the following:

Table 1

Interview Questions

Questions	Probes
Q1. What is your opinion of the COVID-19 vaccine?	<p>Probes: If you haven't gotten it, do you plan to? Why or why not?</p> <p>Follow up only if negative sentiment towards vaccine: Which one best describes you?</p> <ul style="list-style-type: none">• Vaccine demand: You are willing to take the COVID-19 vaccine as recommended by the CDC, following the timeline for the first and second doses.• Vaccine Hesitant: You are unsure whether or not to take the COVID-19 vaccine, or you don't want to take both doses at the times recommended by the CDC.• Vaccine Refusal: You do not want to take the COVID-19 vaccine at all, and refuse to receive it at any time.
Q2. What influenced your opinion on the vaccine?	<p>Probes: Social media? Peers? Other family members? Religion? Politics? Celebrities? Describe your thought process that led you to the different opinion.</p>

Q3. How would you describe your family member's opinion of the COVID-19 vaccine?

Probes: If they haven't gotten, do they plan to? Why or why not?

Follow up only if negative sentiment towards vaccine: Which one best describes your family member?

- Vaccine demand: They are willing to take the COVID-19 vaccine as recommended by the CDC, following the timeline for the first and second doses.
- Vaccine Hesitant: They are unsure whether or not to take the COVID-19 vaccine, or they don't want to take both doses at the times recommended by the CDC.
- Vaccine Refusal: They do not want to take the COVID-19 vaccine at all, and refuse to receive it at any time.

Q4. If you had to guess, what influenced your family member's opinion?

Probes: Social media, peers? Religion? Politics? Celebrities?

Q5. When did you and your family member start to disagree?

Follow up: Do they know you disagree?

- How much do you disagree?
- How old were you?
- If they know, how did they react?
- Do you disagree about any other vaccinations, or is it only COVID-19?

Q6. Tell me about your relationship with your family member now.

Probes: How close would you say you are? What types of feelings do you have towards your family member? Has this disagreement affected your relationship?

Q7: What types of discussions do you currently have about the COVID-19 vaccine with your family member?

Probes: Do you want to talk about it? Do they? How do they respond? How often does it come up? Have you tried to convince your family member of your opinion? Have they tried to convince you of theirs?

Q8: Do you have anything else you'd like to add?

Probes were dependent on previous responses.

Procedures

After being invited to interview, the participants were sent an email confirming their interview times with the virtual consent form and the link to the Webex room. Although the interviews were planned to last around 45 minutes to an hour, all of the interviews were under 30 minutes long. They were also asked to provide which family member they had in mind as they were completing the survey. Interviews were recorded on Webex. Three participants agreed to have both their audio and video recorded, while one declined having his video recorded but consented to having his audio recorded. Questions were occasionally skipped to avoid redundancy. For two of the interviews, participants indicated that they had disagreements with family members outside of the one they had indicated at the beginning of the interview. This prompted follow up questions and probes that were specific to their situation. For example, one of the participants spoke briefly about her mother, but when she was probed about her father, she found she had a lot more to say about their disagreement. She was then asked the same round of eight questions about her father.

The interviews were transcribed using Webex's automatic transcription generator feature. The preliminary transcripts that Webex generated were then hand-transcribed and adjusted using the recorded audio. The transcripts were then thematically analyzed using Braun and Clarke's (2006) method and the qualitative analysis software NVivo. Braun and Clarke's methodology involves "generating initial codes" for interesting features of the data, grouping codes into potential themes, "reviewing themes," and "defining and naming themes" (2006, p. 87).

Results

Survey Results

Out of the 61 completed responses, demographic data showed that most participants were white, women, from Mississippi, and had completed at least one year of college. The survey results also showed that most participants shared the same attitudes on the COVID-19 vaccine as their parents.

Table 2

Participant Survey Data (N = 61)

State	
Mississippi	75.4%
Illinois	1.64%
Texas	1.64%
New Jersey	1.64%
Tennessee	6.56%
Virginia	1.64%
Alabama	3.28%
Louisiana	1.64%
Georgia	3.28%
Ohio	1.64%
Colorado	1.64%
Gender	
Woman	82.0%
Man	16.4%
Some other way	1.64%
Race/Ethnicity	
White	86.9%
Black or African American	11.5%
American Indian or Alaska Native	1.64%
Puerto Rican	1.64%
Education	

Regular high school diploma	16.4%
1 or more years of college	52.4%
Bachelor's degree	8.19%
Associate's degree	16.4%
Some college credit (<1 year)	8.19%
Professional degree beyond a bachelor's	1.64%
Political Leaning	
Democrat	23.0%
Republican	47.5%
Independent, lean Democrat	9.84%
Independent, lean Republican	4.92%
Independent, no lean/don't know	4.92%
Other/don't know, lean Democrat	1.64%
Other/don't know, lean Republican	3.28%
Other/don't know, no lean/don't know	6.56%
Religion	
Agnostic	8.19%
Christian	31.1%
Don't know/Prefer not to answer	3.38%
Nothing in particular	8.19%
Protestant	41.0%
Roman Catholic	6.56%
Religiosity	
Not at all important	6.56%
Not too important	19.7%
Prefer not to answer	1.64%
Somewhat important	31.1%
Very important	41.0%
Marital status	
Divorced	1.64%
Never married	96.7%
Now married	1.64%
Receive financial support from parents	
No	18.0%
Yes	82.0%
Disagree with at least one parent about the COVID-19 vaccine	
Yes	39.4%
No	60.6%

Those who indicated that they had a parent who disagreed with them about the COVID-19 vaccine were asked an additional set of questions. The results of these questions are found in Tables 3, 4, and 5.

Table 3 depicts the demographic data collected about the participant's indicated parent.

Table 3

Parent Survey Data (N = 24)

Political Leaning	
Republican	95.8%
Don't know/other	4.2%
Religion	
Roman Catholic	4.2%
Protestant	54.2%
Christian	41.7%
Religiosity	
Very important	54.2%
Somewhat important	29.2%
Not too important	16.7%
Education	
Some college	4.17%
Regular high school diploma	12.5%
Professional degree beyond a bachelor's	20.8%
Master's degree	16.7%
Grade 1-11	4.17%
Doctorate	4.17%
Bachelor's	12.5%
Associate's degree	12.5%
1 or more years of college	12.5%

Table 4 indicates the participant's COVID-19 vaccination uptake or likelihood of uptake if unvaccinated.

Table 4***Vaccine-specific questions (Participant) (N = 24)***

Participant	
Received at least one dose of the COVID-19 vaccine	54.2%
Has not received at least one dose of the COVID-19 vaccine	45.8%
Will probably not get a COVID-19 vaccine	33.3%
Will definitely not get a COVID-19 vaccine	12.5%

Table 5 depicts the participant’s indicated parent’s COVID-19 vaccination uptake or likelihood of uptake if unvaccinated.

Table 5***Vaccine-specific questions (Parent) (N = 24)***

Parent	
Received at least one dose of the COVID-19 vaccine	54.2%
Has not received at least one dose of the COVID-19 vaccine	45.8%
Will probably not get a COVID-19 vaccine	4.17%
Will definitely not get a COVID-19 vaccine	37.5%

The majority of the participants that had different opinions than their parents also indicated that they shared both religious and political ideologies. Sixty-three percent of participants shared the same political view as their parent (Republican) and 83% reported that they shared the same religion (majority Christian and Protestant). Fifty-four percent of participants had the same level

of religiosity as their parent (majority “very important” or “somewhat important”). Seventy-three percent indicated that their parents had not received a COVID-19 vaccine. Seventy-three percent also indicated that they themselves had not received a COVID-19 vaccine. COVID-19 vaccination status did not always align with attitudes towards the COVID-19 vaccine. That is, a participant who indicated that they had received a COVID-19 vaccine may not have had a positive attitude towards the COVID-19 vaccine, and vice versa.

Interview Results

There was significant overlap in the themes and theoretical codes present in each interview. As the initial codes were developed, patterns began to appear which allowed the data to be grouped into themes. None of the interviewed participants indicated any severe disagreements with their parents on the topic of the COVID-19 vaccine. Two of the participants identified as Republican, and two identified as Independent, with one leaning Republican. Three of the participants indicated that they were Protestant, while the fourth indicated that they were Christian. The participants were typically politically and religiously aligned with their indicated parent, and shared many similar opinions on vaccine mandates and personal choice.

The four major themes identified were 1) Personal choice, 2) Job Influence/Pressure, 3) Politics, and 4) The novelty of the COVID-19 vaccine. Personal choice was mentioned in all four interviews. One interviewed participant expressed a reluctance to receive the COVID-19 vaccine unless it was required by law or his job, while two of the other interviewed participants expressed that they disagreed with the idea of a COVID-19 vaccine mandate; the fourth interviewed participant also stressed the importance of personal choice (Table 6, T1). Some of the subthemes included the belief in one's own natural immunity rather than the immunity gained through a vaccination, and how religion shapes one's view of their body and their choices (i.e.

believing that one should take care of one’s body more carefully if they are a Christian) (Table 6, S1-2).

Table 6

Themes (T) and Sub-themes (S)

The code after each quote identifies a specific participant.

Theme	Illustrative Quote
<p>T1. Personal Choice</p> <ul style="list-style-type: none"> • Expressed the belief that receiving the COVID-19 vaccine should be a choice that each individual should make, or • Expressed the belief that receiving the COVID-19 vaccine is unnecessary unless required 	<p>“Think you should take it into your own account whether or not you should get vaccines. Like, that, I mean, cause it’s how it was handled with influenza up until this point.” (I10)</p> <p>“We both accepted that it was, you know, a voluntary thing, and I chose to do it and he didn’t and that’s how it is.” (I10)</p> <p>“I mean, she told me she was thinking about getting the vaccine and I was like, I mean, you can go ahead and do that, but I’m personally not going to get it...like, that’s – that’s your choice.” (I4)</p> <p>“I just want, like, a choice. You know, there’s like, mandates. I promote choice, you know, like you can get it, you can not get it...I would say that forcing it on people is wrong and you’re taking away people’s choice to take it.” (I7)</p> <p>“Cause like, I really don’t want to get it, but if like, the government passed a law that said you had to, then I would get it.” (I1)</p>
<p>S1. Natural immunity</p> <ul style="list-style-type: none"> • Choices influenced by belief in a person’s natural immunity 	<p>“I already had COVID before, so it wasn’t like it was going to add any more immunity to me.” (I10)</p> <p>“If you’ve had COVID, you can be labeled as fully vaccinated because of your natural</p>

antibodies. I don't think people take that in effect enough." (I7)

S2. Religion

- Choices influenced by religious beliefs

"I have a friend who's very um, in the same boat [as mother], like antivaxx, like, in refusal, and she has a religious reason for it. Because one of the companies that made the vaccine used, like, aborted fetal cells in the research...because of a religious view, she couldn't take the vaccine...and I think my mom would agree with that." (I1)

"I wouldn't say, like, like a religious thing, but definitely like, I care what I put in my body and you know, as a Christian, I take that pretty literal." (I7)

T2. Job Influence

- Expressed the belief that a job's mandates or policies pressured them or someone they know to take the COVID-19 vaccine

"My friend...was required to get vaccinated...because of a religious view, she couldn't take the vaccine." (I1)

"[The vaccine]'s the first of its kind to actually be required...or get you ostracized by your job, or possibly fired without receiving it. It's very, very strange." (I10)

"[Mother] is very easily swayed basically, uh, her work—she works for Delta, she's a flight attendant—and um, she just did it because they were like, 'yeah, y'all should get it,' so she did." (I4)

"Um, not only mandates, people are like, pressured into getting it, um, you know, I just have friends that, you know, have jobs or used to have jobs or, um, you know, they may not mandate it, but they're really pressured. Like they're, um, kind of treated different if they don't have it as if you know, you do have it." (I7)

"You know, people losing jobs, you know, losing their income and you know, in theory, like, maybe struggling with providing for their family, just because they didn't get, you know, a shot." (I7)

S3. Military

- Expressed the belief that specifically the military's mandates or policies pressured them or someone they know to take the COVID-19 vaccine

“[Brother] is like, a civilian job that like works for the government military stuff. So, he was required by the government to get vaccinated...I don't know if we got it before he was required. I kind of think he did.” (I1)

“They were going to become mandatory through the armed forces anyway, and I much, much more, uh, value my career more than crying about just one shot.” (I10)

T3. Politics

- Expressed belief that political ideology shaped either their own opinion of the opinion of their parent(s)

“[Mother] watches the news every day and she's, she's really political and just really into all that.” (I1)

“I would say the things we disagree on are, um, political things, even though we're, we're in a similar boat.” (I1)

“May have been, you know, politicians, stuff he's seeing on Facebook, but his own opinions drive most things that he does.” (I10)

“[Father]'s very conservative, so it also didn't help that like, we have a Democrat in office, and um, you know, all of that. So, he was extremely against the vaccine.” (I4)

“Okay, so I think politics played a very, very big role in that for [father].” (I4)

T4. The novelty of the COVID-19 vaccine

- Expressed that either they or their parents were hesitant about the COVID-19 vaccine due to its relative novelty and perceived lack of long-term research

“We were kind of in agreement, so be like, oh new vaccine came out like, it probably doesn't work like, who knows what the side effects are like. They need to do more testing, like, all kinds of stuff.” (I1)

“Uh, it's just how rushed it is, and [father]'s already had [COVID-19].” (I10)

“It's gone back and forth because at the beginning I was very against it just because I thought, I mean it needed more research, you

know. I, I mean, I wasn't against people who, who wanted to get it." (I4)

"...it was just data. Like I just, it really just needed more, more data, you know. I just didn't want to put something in my body that had no research, that was brand new...it just needed more research." (I4)

"I just simply think there's not enough information about it right now and there's not, you know, long term testing, you know, we don't know what the results are 5, 10 years down the road, after you've had who knows by then, 10 booster shots, you know, so I'm just for choice I think." (I7)

S4. Side effects

- Expressed fear of side effects (typically due to a perceived lack of testing) as being a primary cause of vaccine hesitancy

"I hear like, pretty consistently, people who get it –get the vaccine, and maybe it varies on which type of vaccine you get, but like, feel pretty sick after you get it...I don't really want that. I'm feeling just fine right now." (I1)

"Our main concern for me and my sister, it was like, will it affect us having kids someday like fertility and everything." (I4)

Participants also identified pressure from various jobs that encouraged either themselves, their family members, or someone else they knew to get vaccinated. Two interviewed participants indicated that they knew of people who had been threatened with termination of their employment if they did not receive the vaccine. Interviewed participants also expressed concerns over hypothetical situations in which someone may get fired, ostracized, or treated differently by their employer and/or their place of work due to being unvaccinated. The military was mentioned by two of the interviewed participants as being a method by which they or someone they knew was encouraged to receive the COVID-19 vaccine (Table 6, T2). The military's mandates were viewed both favorably and unfavorably by interviewed participants, and results were mixed on

whether or not the military's involvement in the COVID-19 vaccination was a good or bad thing in the eyes of the participants (Table 6, S3).

Additionally, participants expressed that political ideology influenced their opinions and/or their parents' opinions. As indicated in table 3, the vast majority of the parents were identified by their children as Republicans. All interviewed participants except one indicated that political beliefs shaped their parents' opinions of the vaccine, but none of the interviewed participants indicated that their political beliefs shaped their own opinions (Table 6, T3).

The last main category indicated by the interviewed participants was hesitancy over the newness of the vaccine and the perceived lack of research to support the vaccine. Even those who did not refuse the vaccine or had received the vaccine still mentioned hesitancy due to its novelty. They expressed fears over the lack of long-term research and the potential side effects that may appear down the line due to additional booster shots or the initial round of vaccinations. While some interviewees changed their mind on the vaccine as time progressed and were more willing to accept it due to the lack of side effects present in those who had taken the vaccine, all four interviews expressed hesitancy over the vaccine due to the perception of a lack of thorough research (Table 6, T4). Side effects proved to be a factor in their decision making as well, as two interviewed participants indicated that they were hesitant to receive the vaccine due to fears of side effects such as infertility or an inflammatory response (Table 6, S4).

Discussion

In this study, a survey and interviews were used to explore the differing COVID-19 vaccine attitudes between parent and young adult (18-25) child. The results of the survey indicate that the participants with differing vaccine attitudes than their parents were similar otherwise. The majority of participants who disagreed with their parents about the COVID-19 vaccine still tended to share the same political and religious beliefs, as well as similar levels of religiosity. Although existing literature has shown that these types of ideological beliefs impact vaccine attitudes (Largent et al., 2020; Milligan et al., 2021), there is variance within these ideologies. While one individual may draw upon their religious or political beliefs to explain their vaccine hesitance, the results of the survey show that another may use the same religious or political beliefs to explain why they chose to accept the vaccine. Therefore, the factors that led to the disagreement between the parent and the young adult child were not found to be political or religious. Additionally, interviewed participants spent much of their time focusing on the things that they agreed with their parents on, rather than focusing on arguments they may have had. The themes that were discovered in the interview analysis were therefore present in both the participants' responses about their own beliefs, as well as their responses about their parents' beliefs, reflecting a perception of similarity between the participant and their parents.

The four themes that were discovered in the results were personal choice, job pressure and influence, politics, and the novelty of the COVID-19 vaccine. The first three themes were all related to ideological beliefs such as religious and political views. All interviewed participants mentioned that they believed in the right to personal choice for each individual, and that they chose to take or not to take the vaccine. Those who chose not to receive the vaccine often cited religious reasons or expressed a belief in their own natural immunity over the COVID-19

vaccine's conferred immunity. Although participants reported disagreements with parents, these disagreements were minor. In two of the interviews, the parent and participant shared vaccination status and only disagreed about certain aspects of the vaccine. In the other two interviews, the parent and participant had different vaccination statuses, and, although they were not entirely in agreement, both parties expressed a strong belief in the idea of personal choice. In participant discussions with their parents, both parties were able to come to an understanding based on this principle.

This idea of personal choice leads directly into the next theme, that of job pressure and jobs mandating the COVID-19 vaccine for employees. Even though there were few disagreements, some interviewed participants mentioned that those who take the vaccine just because their job recommended it were weak willed or impressionable. They expressed some outrage over the idea of jobs' vaccine mandates. Participants who received the vaccine because of their job did not express such views –although they mentioned some surprise that the vaccine was being strongly encouraged or enforced, they were willing to receive the vaccine so that they could keep their jobs. Interestingly, these participants still viewed their decision to get vaccinated as entirely their choice, and still expressed negative attitudes towards vaccine mandates. Overall, participants were against vaccine mandates and pressure from employers, even when they themselves took the vaccine because of an employer's pressure, recommendation, or requirement.

The third theme, politics, more directly ties into the Republican ideology. Interestingly, the participants did not indicate that politics played a role whatsoever in their vaccine decision, whether that was acceptance or refusal. However, they did indicate that their parents were potentially influenced by their political beliefs. This is particularly fascinating as most of the

participants shared the majority of their political beliefs with their parents, as indicated in both the survey and the interview. (While the survey may have indicated differences in political opinion, verbally the participants acknowledged more similarities than differences.) One participant even mentioned that although they do not often argue with their parent about the vaccine, they do occasionally argue over political differences, even though they are politically aligned. This shows the variance in beliefs within political parties, and the differences in interpretation of those beliefs. Participants also expressed the idea that their parent held more extreme views than they did –while participants depicted themselves as more open-minded, they mentioned that their parents were very invested in politics and would potentially be more hesitant about the vaccine because of the political climate in the US. Ultimately, while the participants were more likely to identify politics as a reason why their parent might have formed the vaccine opinion that they did, they still acknowledged that many of their views were incredibly similar, even regarding the vaccine.

Interviewed participants typically agreed with their parents regarding vaccine mandates, as mentioned above, but another major point they agreed on was hesitancy on the grounds of the vaccine's novelty. Existing research has found that among vaccine hesitant individuals, this perceived lack of testing was a major concern (Pogue et al., 2020). Three of the participants mentioned that they themselves were concerned about the perceived rushed nature of the vaccine, while one focused on their parents' concerns. Participants mentioned that more testing and more long-term data was needed before they and/or their parents would feel comfortable taking the vaccine and cited this perceived lack of data as a reason why they and/or their parents did not want to receive the vaccine. The fear of side effects was also prevalent, mostly due to, again, the perceived lack of testing, similar to the findings of existing research (Thunstrom et al.,

2021). This fear does not directly tie into the other themes of this study, and further research may help shed light on whether or not there are political reasons behind these fears.

Interviewed participants most often agreed with their parents about mandates and pressure, even if either party were willing to comply, which ties directly into the themes of personal choice, job pressure/influence, and political ideology, and aligns with the Republican and Conservative ideology of individual freedom (Hamilton, 2020). Those who identify as Republican tend to be against mandates and want to be able to make their own choices based on their own opinions. Religion also played a role in the idea of personal choice. Although all the interviewed participants were religious, only one mentioned that they believed their religion played a minor role in their decision making. The Christian and Protestant view that an individual should control and regulate what goes into their body more tightly than those who do not identify as religious may tie into religiosity playing a role in vaccine acceptance vs refusal, but since the parent who expressed the same religious view did take the vaccine, there can be different interpretations of the tenets of Christianity and Protestantism. It is possible that different interpretations of a certain religious or political ideology will lead to different levels of vaccine uptake.

A common idea throughout both the second theme (Job Influence) and the third theme (Politics) was that participants were often far more willing and able to point towards external influences that shaped their parent's opinions than they were for their own opinions. While the participant may have been willing to say that their parents were strongly influenced by their political beliefs, they were unwilling to say the same about themselves. This could be due to many factors. Since they did not indicate that their parents had explicitly told them what influenced their opinions, a lot of their responses about their parents' opinion were assumptions.

Guessing another person's opinion may not be as reliable or nuanced as actually interpreting one's own opinions. It is possible that if their parents were asked the same set of questions, a similar trend would emerge. Additionally, third person effects may have played a role in the discrepancy between the participant's responses about themselves vs their parents. Third person effects describe the tendency of an individual to "perceive media messages to have greater effects on other people than on themselves" (Salwen & Dupagne, 1999). Although the participant and their parents shared political views, the participant may have believed that they were less susceptible to political messages than their parents were due to this phenomenon. Ultimately, participants were more willing to point out the external influences that they believed their parents were susceptible to, but more often pointed internally to explain their own opinions.

The results of this project provide answers to the majority of the original research questions posed at the beginning of this project. Research question (RQ) one asked which factors influence young adults' divergence from their parent's opinions regarding the COVID-19 vaccine. This question was not conclusively addressed, since as mentioned above, participants were able to easily identify what influenced their parents' opinions, but had trouble identifying the source of their own opinions. RQ2 asked what types of discussions parents and young adults have about the vaccine, and RQ3 asked if there were any conflicts. The results of this project indicate that very few conflicts occurred, and the discussions were respectful, indicating that perhaps conversations between likeminded individuals may reduce the polarized nature of the COVID-19 vaccine.

Although the intention of this study was to collect data before drawing any conclusions, it was still surprising that there were so few disagreements between the parents and the participants with diverging opinions. Given how polarizing and controversial the COVID-19 vaccine has

been, the expectation was that more arguments between those of differing attitudes would have occurred. Further research could explore whether the number of arguments changes based on political and religious differences. It would be insightful to investigate whether a Democrat or an agnostic individual has more disagreements with a Republican or Christian parent, or vice versa. It would also be interesting to see how the data changes with a nonreligious family, or a Democrat parent and child. Further research could also continue to investigate Republican families; since Republicans tend to have more negative attitudes towards the COVID-19 vaccine, gathering more data about the relationship between parents and young adult children who disagree could provide insight into the factors outside of politics that influence vaccine uptake – and how political views can be utilized to promote vaccine acceptance.

Limitations

Many of the limitations of this study have to do with time constraints and the scope of the study, which include the small sample size and the lack of diversity within the sample pool. Since this study was intended for a senior honors thesis, there was not as much time as what would have been ideal for data collection and analysis. If this study were to be repeated, beginning data collection earlier before any deadlines would make the process much easier and would allow for more constant comparative analysis as is dictated by a Grounded Theory (Glaser & Strauss, 1967) approach to data analysis, which was the planned analysis method. As it stands, since the majority of the interviews that were conducted occurred within a few days of each other, constant comparison during data analysis was not possible until the fourth interview, but since that was the final interview, the comparisons were essentially just the final data analysis phase before writing began. The project was originally intended to use the Grounded Theory, but because of the small amount of data and the lack of time, I shifted to a thematic analysis (Braun & Clarke, 2006) approach.

The scope of the study was unfortunately small. The intended sample size was 20-30 interviews or more until data saturation was reached, with constant comparative analyses being conducted between every few interviews. Since only four participants ($N=4$) agreed to interview, the study was quite far away from saturation. The study was also confined to Mississippi State University students, with the only recruitment being through the Department of Communications and the pre-health concentration email list. The sample itself was also extremely homologous, with all four participants being white, three of the four participants being Republican (and the other being Independent), and none of them disagreeing intensely with their parents' opinions as they mostly aligned politically. All the parents were identified by their child as Republican, as

well, on the survey and within the interview. The majority of the participants who filled out the survey identified as women, but the majority of the interviewed participants were men ($N=3$). There were far more similarities than differences between all interviewed participants, which lends itself well to creating themes based on the data, but the themes may not hold true for participants with different demographic characteristics.

Timing also may have limited the diversity of the responses during the interview. For example, the majority of these interviews took place in early February. In late December into early January, vaccine mandates were put into place for military and federal workers, along with some large businesses. These new requirements were on the forefront of people's minds during this time period. The discussions about mandates of the COVID-19 vaccine were incredibly common among interviewed participants, and it is likely because of the time frame this research is situated in.

Future research should focus on expanding the sample size, both outside of Mississippi State University and by sheer numbers and demographics. Adding new or additional themes to this study based on new participant data would be a worthwhile venture, especially if the data do not align with the results of this study. I would be interested to see how the data change based on the addition of participants from different racial or political backgrounds, and what the data would look like if the study was expanded to reach many more young adults outside of Mississippi State University.

Implications

Despite the limitations noted above, this study has valuable implications for health communicators and medical professionals as they search for ways to increase vaccine acceptance. As outbreaks of vaccine-preventable diseases continue to occur due to vaccine hesitancy and refusal, health communicators and healthcare providers should look for different ways to effectively persuade the public to take the COVID-19 vaccine. By understanding the dynamic between young adults and their parents regarding the COVID-19 vaccine, communicators can more effectively tailor vaccine promotion.

Survey data showed that even participants who disagreed with their parents about the COVID-19 vaccine shared political beliefs. Interview data showed that although the participants disagreed with their parents, there were few arguments and participants typically focused on what they agreed on rather than what they did not. COVID-19's continued destabilization of the healthcare system shows just how vital it is to promote vaccine acceptance. By tailoring educational messages to young adults who are politically aligned with their parents, health communicators can utilize young adults as a method of vaccine communication and promotion. These messages can be centered on deemphasizing the polarization of the vaccine while informing hesitant individuals about the vaccine.

Research conducted on those who have otherwise similar beliefs but disagree on the COVID-19 vaccine could help inform constructive conversations between likeminded individuals. These conversations could increase vaccine acceptance among individuals sharing the same political beliefs.

Conclusions

While the scope of this study is too small to make any generalizable conclusions, the data set showed that when vaccine attitudes varied within families, young adult children tended to be understanding of their parents' vaccine opinions and attitudes, and vice versa. There were few arguments or disagreements, and participants preferred to focus on what they and their parents agreed upon. Both parties expressed a strong belief in personal choice, and those who accepted the COVID-19 vaccine understood the hesitancy over its novelty. Future research could address whether these respectful and understanding discussions between close individuals (such as a parent and child) could help promote vaccine acceptance.

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Appendix

Survey Questions

Start of Block: Default Question Block

Q1 Informed Consent Form for Participation in Research for Exempt Research*

IRB Approval Number: IRB-21-273

Title of Research Study: Investigating differing COVID-19 vaccine attitudes within families

Researcher(s): Sarah Grace Dulaney, Mississippi State University. Dr. Holli Seitz, Mississippi State University.

Procedures: We would like to ask you to participate in a research study about COVID-19 vaccine attitudes between close family members. If you participate in this study, you will be asked to complete a survey that will take about 10-15 minutes to complete.

After the survey is completed, you may be contacted by the email address you provide for a follow up interview. This interview will be scheduled at your convenience and will take place over the phone. It will consist of eight questions and will last no more than an hour. Most interviews so far have taken no more 20-30 minutes. If you complete the interview, you will be compensated with a \$15.00 virtual Amazon gift card.

Questions: If you have any questions about this research project, please feel free to contact Sarah Dulaney at sgd123@msstate.edu or 601-218-6321 or Dr. Holli Seitz at hseitz@comm.msstate.edu or 662-325-1570.

Voluntary Participation: Please understand that your participation is voluntary. Your refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may discontinue your participation at any time without penalty or loss of benefits. Please take all the time you need to read through this document and decide whether you would like to participate in this research study. If you decide to participate, your completion of the research procedures indicates your consent.

*The MSU HRPP has granted an exemption for this research. Therefore, a formal review of this

consent document was not required.

I consent (1)

I do not consent (2)

Skip To: End of Survey If Informed Consent Form for Participation in Research for Exempt Research IRB
Approval Number: IRB... = I do not consent*

Q2 Name (First and Last)

Q3 Email Address

Q4 Phone number

Q5 State

Q6 Do you describe yourself as a man, a woman, or in some other way?

Man (1)

Woman (2)

Some other way: (3) _____

Prefer not to answer (4)

Q7 Age

Q8 Are you of Hispanic, Latino, or Spanish origin?

No, not of Hispanic, Latino, or Spanish origin (1)

Yes, Mexican, Mexican American, Chicano (2)

Yes, Puerto Rican (3)

Yes, Cuban (4)

Yes, another Hispanic, Latino, or Spanish origin (5)

Q9 What is your race?

White (1)

Black or African American (2)

American Indian or Alaska Native (3)

Asian (4)

Native Hawaiian or Pacific Islander (5)

Other (6)

Q10 What is the highest degree or level of school that you have COMPLETED? If currently enrolled, mark the previous grade or highest degree received.

- No schooling completed (1)
- Nursery school (2)
- Kindergarten (3)
- Grade 1-11 (4)
- 12th grade --no diploma (5)
- Regular high school diploma (6)
- GED or alternative credential (7)
- Some college credit, but less than 1 year of college credit (8)
- 1 or more years of college credit, no degree (9)
- Associate's degree (10)
- Bachelor's degree (11)
- Master's degree (12)
- Professional degree beyond a bachelor's degree (13)
- Doctorate degree (14)

Q11 In politics TODAY, do you consider yourself a Republican, Democrat, or independent?

- Republican (1)
- Democrat (2)
- Independent (3)
- Other/Don't know (4)

Display This Question:

If In politics TODAY, do you consider yourself a Republican, Democrat, or independent? = Other/Don't know

Or In politics TODAY, do you consider yourself a Republican, Democrat, or independent? = Independent

Q12 As of today, do you lean more to the Republican Party or more to the Democratic Party?

- Republican (1)
 - Democratic (2)
 - Neither/don't know (3)
-

Q13 What is your present religion, if any?

- Protestant (Baptist, Methodist, Non-denominational, Lutheran, Presbyterian, Pentecostal, Episcopalian, Reformed, Church of Christ, etc.) (1)
- Roman Catholic (Catholic) (2)
- Mormon (Church of Jesus Christ of Latter-day Saints/LDS) (3)
- Orthodox (Greek, Russian, or some other Orthodox Church) (4)
- Jewish (Judaism) (5)
- Buddhist (6)
- Hindu (7)
- Atheist (do not believe in God) (8)
- Agnostic (not sure if there is a God) (9)
- Nothing in particular (10)
- Christian (11)
- Unitarian (universalist) (12)
- Jehovah's Witness (13)

Don't know/Prefer not to answer (14)

Q14 How important is religion in your life?

Very important (1)

Somewhat important (2)

Not too important (3)

Not at all important (4)

Prefer not to answer (5)

Q15 What is your marital status?

Now married (1)

Widowed (2)

Divorced (3)

Separated (4)

Never married (5)

Q16 Are you the parent or guardian of any children under 18 now living in your household?

Yes (1)

No (2)

Q17 Do you receive financial support from your parents/guardians?

Yes (1)

No (2)

Q18 Do you and at least one of your parents/guardians disagree on the COVID-19 vaccine?

Yes (1)

No (2)

Skip To: End of Survey If Do you and at least one of your parents/guardians disagree on the COVID-19 vaccine? = No

Q37 For the following questions, consider the parent/guardian whose opinion differs the MOST from yours.

Q19 In politics TODAY, does your parent/guardian consider themselves to be a Republican, a Democrat, or Independent?

Republican (1)

Democrat (2)

Independent (3)

Don't know/other (4)

Q20 What is your parent/guardian's present religion, if any?

- Protestant (Baptist, Methodist, Non-denominational, Lutheran, Presbyterian, Pentecostal, Episcopalian, Reformed, Church of Christ, etc.) (1)
- Roman Catholic (Catholic) (2)
- Mormon (Church of Jesus Christ of Latter-day Saints/LDS) (3)
- Orthodox (Greek, Russian, or some other Orthodox Church) (4)
- Jewish (Judaism) (5)
- Buddhist (6)
- Hindu (7)
- Atheist (do not believe in God) (8)
- Agnostic (not sure if there is a God) (9)
- Nothing in particular (10)
- Christian (11)
- Unitarian (universalist) (12)
- Jehovah's Witness (13)

Don't know/Prefer not to answer (14)

Q21 How important is religion in your parent/guardian's life?

Very important (1)

Somewhat important (2)

Not too important (3)

Not at all important (4)

Prefer not to answer (5)

Don't know (6)

Q22 What is the highest degree or level of school that your parent/guardian has COMPLETED?
If currently enrolled, mark the previous grade or highest degree received.

- No schooling completed (1)
- Nursery school (2)
- Kindergarten (3)
- Grade 1-11 (4)
- 12th grade --no diploma (5)
- Regular high school diploma (6)
- GED or alternative credential (7)
- Some college credit, but less than 1 year of college credit (8)
- 1 or more years of college credit, no degree (9)
- Associate's degree (10)
- Bachelor's degree (11)
- Master's degree (12)
- Professional degree beyond a bachelor's degree (13)
- Doctorate degree (14)

Don't know (15)

Q23 Have you received at least one dose of a vaccine to prevent COVID-19?

Yes (1)

No (2)

Display This Question:

If Have you received at least one dose of a vaccine to prevent COVID-19? = No

Q24 Thinking about vaccines to prevent COVID-19, do you think you will...

Definitely get a vaccine (1)

Probably get a vaccine (2)

Probably NOT get a vaccine (3)

Definitely NOT get a vaccine (4)

Q25 Has your parent or guardian received at least one dose of a vaccine to prevent COVID-19?

- Yes (1)
 - No (2)
 - Don't know (3)
-

Display This Question:

If Has your parent or guardian received at least one dose of a vaccine to prevent COVID-19? = No

Q26 Thinking about vaccines to prevent COVID-19, do you think your parent/guardian will...

- Definitely get a vaccine (1)
 - Probably get a vaccine (2)
 - Probably NOT get a vaccine (3)
 - Definitely NOT get a vaccine (4)
-

Q27 Would you like to be contacted to interview virtually about the difference of opinion between you and your parent/guardian?

- Yes (1)
 - No (2)
-

Display This Question:

If Would you like to be contacted to interview virtually about the difference of opinion between you...
= Yes

Q28 Do you consent to the interview's audio being recorded?

Yes (1)

No (2)

Display This Question:

If Would you like to be contacted to interview virtually about the difference of opinion between you...
= Yes

Q29 Do you consent to the interview's video being recorded?

Yes (1)

No (2)

Q36 Please check the box below to proceed.

End of Block: Default Question Block
