

COVID-19 Report: Attitudes and Actions, Three Years Later

GPH-GU 5210: Global Health Disaster Preparedness and Response
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Objectives:

COVID-19 Widespread vaccination is critical to combat the pandemic, but achieving high vaccination rates in the United States is a challenge. A survey conducted in June 2022 showed that 19.8 percent of U.S. adults are still hesitant to receive the COVID-19 vaccine, fueled in part by misinformation and perspectives. Reports indicate that those with less trust in government and less education are more hesitant.¹ Therefore, understanding individuals' experiences and perceptions is essential to assess the effectiveness of current interventions and to guide future public health emergency management strategies. A cross-sectional study was conducted designed to investigate individuals' experiences and perceptions regarding COVID-19 and to assess their trust in public health authorities during the pandemic. This study helps us gain insight into the public's response to a pandemic and identify areas for improvement in future public health emergency management. Data were collected through an online questionnaire from February 28 to March 13, 2023, and included a total of 138 responses from participants primarily residing in New York, Georgia, and New Jersey. The team collected several key outcome variables including vaccination rates, COVID-19 exposure rates, and confidence in authority figures and institutions. The results show a lack of trust in the government's preparedness and take it seriously for future pandemics.

Methods:

This cross-sectional study was conducted from February 28th, 2023, to March 13th, 2023, using an online questionnaire through a platform called Qualtrics. The anonymous survey consisted of 21 multiple-choice questions regarding demographics and COVID-19 experiences. Using Qualtrics, four New York University students copied a secure link and distributed it via email or text for data collection. Each member was responsible for a minimum of ten survey entries with a group total of 138 responses. A number of tools provided by the online platform assisted with obtaining frequency and position measures. To analyze the data, cross-tabulation subgroups were used to filter the results.

Results:

In the study there is a sample size of $n=136$. 136 out of 138 responses are finished and valid. As shown in the demographic table (table 1), the majority of respondents are young (25-34, 41.2%, 18-24, 31.6%), female (75.7%), Black or African American (37.7%), and not Hispanic or Latino (79.4%). Over half of the respondents have a bachelor degree or higher (55.9%). The top three states of residence are New York (38.2%), Georgia (33.8%), and New Jersey (16.2%). The complete report of study participants demographics could be found in Appendix, Table 1. The majority of participants were fully vaccinated against COVID-19 (84.8%), and the overall level of compliance to public health measures to limit the spread of COVID-19 infection was above average (49.3%). Almost half of the respondents believed that they had COVID-19 for 5 or more times (45.7%), and only 7.2% of respondents believed that they were not infected with COVID-19 at all.

Discussion:

Team 4 collected 138 responses, with most participants either living in New York (52), Georgia (46), or New Jersey (22). One team member is a Georgia native and pulled on networks from family and friends that led to the Georgian representation. The vast majority of respondents have been vaccinated with at least one dose of the COVID-19 vaccine, and at least one booster

(Table 2). Collectively, the majority of respondents have tested positive for COVID-19, with results coming from home tests, health clinics, or both **(Table 2)**.

More than half of respondents personally knew someone who was *hospitalized* due to COVID-19, but less than half of respondents personally knew someone who *died* due to COVID-19. Nearly half of respondents believe they've been exposed to COVID-19 five or more times, which is very telling. Given that this is the third year of the pandemic, it's logical that individuals have been exposed to COVID-19 multiple times, but now have greater knowledge and tools for combating infection, hospitalization, and death (via masking, social distancing, vaccination, etc.).

Regarding authoritative figures and COVID-19, many respondents reported having little confidence that the U.S. government would be prepared for another pandemic. However, in terms of trusted sources for public health information, the top three sources listed by respondents were the Centers for Disease Control and Prevention (CDC), one's healthcare provider, and one's local public health department.

Demographically, the majority of respondents were between the ages of 25 and 34, and the largest racial groups represented were Black/African American (n = 52), White (n = 45), and Asian (n = 33) **(Table 1)**. Over three-quarters of respondents identified as women **(Table 1)**. More than half of respondents have completed at least a bachelor's degree, and over a third have earned master's or Professional/Doctoral degrees **(Table 1)**.

Though Team 4 was able to collect a sizable number of responses (n = 138), there are important factors and limitations to consider when assessing the trends in the data. First, this is *not* a random sample, as this team distributed the survey link to individuals we knew directly, or people in our networks (educational, professional, etc.). This is evident in various areas, such as the percentage of respondents vaccinated in this sample vs the United States at large (~81% of the U.S. has received at least one dose,² compared to ~94% in the sample), or educational attainment (~23.5% of people in the U.S. have a Bachelor's degree,³ compared to ~55.9% of the sample). This is a case of selection bias, and indicates that the data is neither representative of nor generalizable to the U.S. population. Additionally, this survey did not collect residence data from outside of the U.S., preventing international responses and presenting another limitation in the study. Another potential form of bias present in this study is recall bias, a form of bias in which the incorrect recollection of past or infrequent events leads to errors in self-reporting. There are a number of questions in which respondents are asked to recall past events, such as how many times they believe they've been exposed to COVID-19 since Spring 2020, or the public health recommendations they followed *before* the COVID-19 vaccine was made available in 2021. As more time passes since the onset of COVID-19, it can become harder to remember one's health behaviors throughout the duration of the pandemic.

As graduate level public health students, this team demonstrates a commitment to the study and practice of public health, and our communities (be it our families, friends, classmates, or coworkers) likely exercise that same commitment. It is important, however, to look beyond demographics when assessing these behaviors. This data shows that people look to verified health professionals and institutions for COVID-19 information. It's crucial, then, that these institutions do the work to not only provide timely and accurate data but do so in a way that is both accessible and culturally competent, so that a wide variety of individuals feel safe and informed in their health decisions.

Conclusion: In this study, the majority of respondents were vaccinated and had a good knowledge of COVID-19. This could be attributed to their higher educational attainment and trust in reputable health institutions such as the CDC, medical facilities, and local public health departments. However, the findings also suggest that the public does not trust that the government will take the future pandemic seriously and be prepared for it. Future research could explore the reasons behind this lack of confidence and investigate strategies for strengthening trust in public health agencies in a more diverse and representative sample of the population.⁴ This finding reminds us that we are all in this together, relying on accurate, timely and culturally sensitive guidance from a trusted source to protect our communities. So don't wait for another crisis to realize the value of clear communication and collaboration.

References

1. Solís Arce, J.S., Warren, S.S., Meriggi, N.F. *et al.* COVID-19 vaccine acceptance and hesitancy in low- and middle-income countries. *Nat Med* 27, 1385–1394 (2021). <https://doi.org/10.1038/s41591-021-01454-y>
2. USA Facts (2023). US Coronavirus vaccine tracker: What's the nation's progress on vaccinations? Date accessed 16 March 2023. Retrieved from <https://usafacts.org/visualizations/covid-vaccine-tracker-states>.
3. United States Census Bureau (2022). Census Bureau Releases New Educational Attainment Data. Date accessed 16 March 2023. Retrieved from <https://www.census.gov/newsroom/press-releases/2022/educational-attainment.html>.
4. Shmueli L. (2021). Predicting intention to receive COVID-19 vaccine among the general population using the health belief model and the theory of planned behavior model. *BMC public health*, 21(1), 804. <https://doi.org/10.1186/s12889-021-10816-7>.

Appendix:

Table 1. Demographics

	%	# of Responses
Age		
18-24	31.6%	43
25-34	41.2%	56
35-44	5.9%	8
45-54	9.6%	13
55-64	7.4%	10
65-74	3.7%	5
75 years or older	0.7%	1
Ethnicity		
Hispanic or Latino	14.7%	20
Not Hispanic or Latino	79.4%	108
Prefer not to answer	5.9%	8
Race		
American Indian or Alaska Native	1.4%	2
Asian	23.9%	33
Black or African American	37.7%	52

Native Hawaiian or Other Pacific Islander	1.4%	2
White	32.6%	45
Multiple Races	2.9%	4
Prefer not to answer	5.8%	8
Gender		
Male	21.3%	29
Female	75.7%	103
Non-binary	0.7%	1
Other	1.5%	2
Prefer not to answer	0.7%	1
Highest education level		
Less than High School Diploma or GED	0.7%	1
High school diploma or GED	5.9%	8
Associate's Degree	2.9%	4
Bachelor's Degree	55.9%	76
Master's Degree	29.4%	40
Professional/Doctoral Degree	4.4%	6
Prefer not to answer	0.7%	1

Current state		
New York	38.2%	52
Georgia	33.8%	46
New Jersey	16.2%	22
South Carolina	2.9%	4
Florida	2.2%	3
Colorado	1.5%	2
North Carolina	1.5%	2
Arizona	0.7%	1
California	0.7%	1
Louisiana	0.7%	1
Nevada	0.7%	1
Massachusetts	0.7%	1

Table 2. COVID-19 Results

	%	# of Responses
Concern about getting infected with COVID-19		

Not at all	29.0%	40
Somewhat	46.4%	64
Concerned	15.9%	22
Moderately	8.7%	12
Personal overall level of compliance to public health measures to limit the spread of COVID-19 infection		
Excellent	33.3%	46
Above Average	49.3%	68
Average	13.0%	18
Below Average	4.3%	6
Ever had a COVID-19 diagnosis or positive test result		
Yes - by a health professional or clinic	23.2%	32
No	31.2%	43
Yes - via a rapid/PCR home testing kit	22.5%	31
Yes - both	23.2%	32
Don't remember	0.0%	0
How many times you think you've been exposed to COVID-19		
0 times	7.2%	10

1 time	18.8%	26
2 times	11.6%	16
3 times	9.4%	13
4 times	7.2%	10
5 times or more	45.7%	63
Personally know anyone who was hospitalized due to COVID-19		
Yes	57.2%	79
No	39.1%	54
Don't remember	3.6%	5
Personally know anyone who has died from COVID-19		
Yes	46.4%	64
No	51.4%	71
Don't remember	2.2%	3
Vaccinated against COVID-19		
Yes	93.5%	129
No	5.8%	8
Don't remember	0.7%	1
Received COVID-19 vaccine booster		

Yes	84.8%	117
No	13.8%	19
Don't remember	1.4%	2
Level of confidence in U.S. government's preparedness for another pandemic		
Not at all	44.2%	61
Somewhat	37.7%	52
Confident	14.5%	20
Very	2.9%	4
Extremely	0.7%	1
Most trusted sources for public health information		
The Centers for Disease Control and Prevention (CDC)	27.2%	101
My healthcare provider	20.2%	75
Local Public Health Department	16.9%	63
A federal government health official (e.g., Dr. Anthony Fauci)	15.3%	57
Friends & family	9.1%	34
Personal social media and/or knowledge research (e.g., Google)	9.1%	34
Community or religious leaders	1.3%	5

One or more politicians	0.5%	2
One or more celebrities and/or media personalities	0.3%	1