

Assessing Public Perceptions of Pandemic Preparedness and Response

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Objective

This study aimed to evaluate the public perception, attitudes, and experiences with COVID-19 and how these factors may have been influenced by their sources of information and compliance to government recommendations. Data was collected regarding if individuals were vaccinated, health data pertaining to COVID-19 infection (both personal and of others), demographics, and their confidence in the preparedness and response of both the government and others in case of future health emergencies (e.g. pandemics). The survey found that while 75% of all respondents were vaccinated with at least one booster, 88.89% of all respondents were somewhat or not at all concerned about getting infected with COVID-19 as of March 2023 despite 39.06% of this sub-group ranking COVID-19 as the biggest threat to health in 2023. As a whole, the survey population also had low confidence in the preparedness of the government to respond to another pandemic with 43.66% responding somewhat confident and 49.3% not at all confident. While COVID-19 infection currently seems to be ranked a low risk for most respondents, the COVID-19 pandemic and the difficulties in establishing response mechanisms have impacted the confidence of the public in preparedness for the future.^{1,2}

Methods

This cross-sectional study design obtained qualitative and quantitative data from the Qualtrics online survey software. As part of the survey participants were sent an anonymous link to complete the 21-question online survey about their COVID-19 experience to assess factors associated with their perception of COVID-19 and behavioral patterns exhibited during the COVID-19 pandemic. The target survey audience were residents of the U.S. that were between 18 through 75 years and older of age. Participants were asked questions about socio-demographic characteristics; perceived number of times having been exposed to COVID-19 (multiple choice); attitude towards becoming infected again (Likert scale of confidence); if applicable, compliance with public health mitigation strategies (checkbox); perceived biggest public health threat in the U.S. (checkbox); personal experiences with COVID-19, such as vaccination (multiple choice); and level of confidence in the government to combat future global pandemics (Likert scale of confidence). The survey results were then categorized by the types of questions asked along with frequency (percent) for each question answered in an excel spreadsheet. Descriptive statistics including the mean, median, mode, standard deviation and range were used to analyze the data in the survey.

Results

The survey was conducted between March 5, 2023, and March 22, 2023, collecting responses from a total of 75 participants. The demographic characteristics of the respondents are outlined in Table 1. Respondents resided in different parts of the United States including California, Florida, Kansas, New Jersey, New York, Massachusetts, South Carolina, Texas, and Vermont. The majority of the respondents identified as female, constituting a significant 85.5% of all participants. Respondents of all races were represented, but most respondents were either White (50%) or Black/ African American (36%). Of the 69 respondents who disclosed their highest educational level, the majority (49%) held a bachelor's degree, followed by 22% with a master's degree, 17% with a High School Diploma or GED, 7% with a Doctorate degree, and 4% with an associate degree. Most respondents fell within the 18-34 age range with 23.19% aged 18-24 and 27.54% aged 25-34. The age range with the fewest respondents was 75 & older, accounting for only 1.45% of the responses.

Survey respondents' experiences with COVID-19 are reported in Table 2. Most respondents (57.7%) reported being exposed to COVID-19 at least four times and 54% reported having symptoms of COVID-19 that had been confirmed by either a health professional/clinic or via a rapid/PCR home testing kit. 95% of respondents disclosed being vaccinated with at least one dose of the COVID-19 vaccine and 75% reported receiving any of the COVID-19 boosters.

Of 72 respondents, 60% disclosed knowing someone hospitalized due to COVID-19 infection while 50% disclosed knowing someone who died due to COVID-19 complications. Confidence levels in the U.S. Government and U.S. populations' preparedness for another pandemic are reported in Figure 1 which demonstrates that almost 50% of respondents are not at all confident in either group's ability to respond to a subsequent pandemic. Table 3 outlines the actions and attitudes of the respondents during the COVID-19 pandemic while Figure 2 presents respondents' most trusted sources for public health information.

Discussion

The aim of this study was to evaluate the public perception, attitudes, and experiences with COVID-19 as well as the way these factors were influenced by their sources of information and compliance to government recommendations. This was done using quantitative data from the Qualtrics online survey software.

Our finding that a majority of respondents reported being exposed to COVID-19 indicates the perception of the prevalence of COVID and overall awareness of individual risk of exposure. In this study, we found that over half of respondents reported confirmed symptoms of COVID-19, and almost all disclosed having been vaccinated with at least one dose of the vaccine, indicating the overall perception of the seriousness of stopping the spread and the individual responsibility and need for preparedness in preventing COVID-19. Significant findings show that over half of the respondents knew someone hospitalized due to COVID and half knew someone who died. This indicates there were high perceptions of risk and preparedness of COVID-19 even though half still reported having no confidence in the US Government or population's ability to be properly prepared for another pandemic. The top three most trusted sources for public health information according to those surveyed were The Center for Disease Control (CDC) in first place, followed by healthcare providers at number two and local public health departments at number three. This absence of confidence in the US government shows a potential need for stronger emergency public health communications between all levels of government in conjunction with the CDC, healthcare providers, and local public health entities to the population, particularly regarding epidemics and pandemics. These findings also present opportunities for more research and education surrounding preparedness and response in the context of communicable diseases.

One limitation to this study is possible social desirability bias, as participants may feel inclined to answer in the 'socially acceptable' way. In addition, some could perceive the survey questions as being 'too personal' and there is potential for dishonest answers or lack of information due to fear of judgment.

Conclusion

After three years of grappling with the COVID-19 pandemic, public perception, attitudes, and experiences with COVID-19 have been greatly influenced and impacted by a number of factors. While the survey data indicates that respondents were conscientious about getting vaccinated and boosted, applying safety measures, and adhering to recommendations and safety measures from the CDC, healthcare providers, and other sources of information, respondents' confidence in the preparedness for future health emergencies remains low. In a 2021 survey conducted by the Global Health Security (GHS) Index, it was found that the United States "had the lowest possible score on public confidence in the government—a factor that has been identified as key among countries with high numbers of COVID-19 cases and deaths."² This lack of confidence appears to have remained consistent, with the results of this 2023 survey indicating that this lack of confidence, both in the government and other residents of the U.S., has been perpetuated. This is significant, especially as the Biden Administration and U.S. Department of Health and Human Services (HHS) plan to declare the end of the COVID-19 national emergency and public health emergency (PHE) on May 11 2023.³ The COVID-19

pandemic is a clear indication that the United States is on the precipice of experiencing a major shift in the public health paradigm. As public health leaders continue to revive the U.S. economy, it is imperative for the country to improve and develop emergency preparedness structures to fully optimize health outcomes for all people living in the United States. Ultimately, the COVID-19 pandemic has drastically strained the public health sector at both the national and community level and highlights the need for significant investment in the treatment and prevention of future infectious disease pandemics worldwide.

Appendix

Table 1: Baseline Demographic Characteristics

Category	Frequency (%)
Age	
Under 18	0 (0%)
18-24	16 (23.19%)
25-34	19 (27.54%)
35-44	10 (14.49%)
45-54	10 (14.49%)
55-64	8 (11.59%)
65-74	5 (7.25%)
75 & older	1 (1.45%)
	*69 responses
Gender	
Male	9 (13.04%)
Female	59 (85.51%)
Non/binary	0 (0%)
Other	0 (0%)
Prefer not to answer	1 (1.45%)
	*69 responses
Race	
American Indian/Alaska Native	1 (1.38%)
Asian	6 (8.33%)
Black or African American	26 (36.11%)
Hawaiian/Pacific Islander	1 (1.38%)
White	36 (50%)
Prefer not to answer	2 (2.77%)
	*72 responses
Ethnicity	
Hispanic or Latino	3 (4.48%)
Not Hispanic or Latino	60 (89.55%)
Prefer not to answer	4 (5.97%)
	*67 responses
U.S. State	
California	1 (1.49%)
Florida	24 (35.82%)
Kansas	3 (4.48%)
New Jersey	2 (2.99%)
New York	22 (32.84%)
Massachusetts	1 (1.49%)
South Carolina	1 (1.49%)
Texas	12 (17.91%)
Vermont	1 (1.49%)
	*67 responses

Highest Educational Level

Less than High School Diploma or GED	0 (0%)
High School Diploma or GED	12 (17.39%)
Associate's Degree	3 (4.35%)
Bachelor's Degree	34 (49.28%)
Master's Degree	15 (21.74%)
Doctoral Degree or Equivalent	5 (7.25%)
Prefer not to answer	0 (0%)

*69 responses

Table 2: COVID-19 Experiences

Personal Experiences with COVID-19 since 2020						
Question	Yes	No	Don't Know or Remember	Total number of responses		
Have you been vaccinated with at least one dose of the COVID-19 vaccine?	69	3	0	72		
Have you been vaccinated with any of the COVID-19 vaccine boosters?	54	18	0	72		
Do you personally know anyone who was hospitalized due to infection with COVID-19?	43	29	0	72		
Do you personally know anyone who died due to complications of COVID-19?	36	35	1	72		
Question	Yes - by a health professional or clinic	Yes - via a rapid/PCR home testing kit	Yes - both	No	Don't Remember	Total number of responses
Have you ever been informed, either by a health professional or home testing kit, that you had or showed symptoms of COVID-19?	10	22	22	16	2	72
Question	0 times	1 time	2 times	3 times	4 times	Total number of responses
Since the start of the pandemic in the US (early spring of 2020), how many times do you think you were exposed to COVID-19?	3	8	10	9	41	71

Table 3: Actions and Attitudes

Question	Frequency (%)
Before the COVID-19 vaccine was available in the U.S., what public health recommendations did you follow to protect yourself from infection? (Please select all that apply)	
Distanced from others	64
Washed hands/used sanitizer	66
Wore face masks/covering	64
Avoided crowds	66
Other	2

*71 responses

As the COVID-19 vaccines became more widely available in the U.S., what public health recommendations did you continue to follow to protect yourself from infection? (Please select all that apply)

Distanced from others	36
Washed hands/used sanitizer	61
Wore face masks/covering	57
Avoided crowds	37
Other	3
	*71 responses

How would you rate your overall compliance with public health recommendations to limit the spread of COVID-19?

Excellent	17 (23.94%)
Above Average	33 (46.48%)
Average	19(26.76%)
Below Average	2 (2.82%)
	*71 responses

Over the course of the COVID-19 vaccine rollout, do you believe that wider availability of rapid/PCR viral testing and vaccine administration was a contributing factor to receive the vaccine and/or booster?

Yes	60(84.51%)
No	8 (11.27%)
N/A - I have not received a COVID-19 vaccine	3(4.23%)
	*71 responses

At this time, how concerned are you about getting infected with COVID-19?

Not at all concerned	28 (38.89%)
Somewhat concerned	36 (50%)
Concerned	6(8.33%)
Moderately concerned	2 (2.78%)
	*72 responses

Which of the following communicable diseases do you currently view as the biggest threat to your health in 2023?

COVID-19	30(42.25%)
Ebola	1(1.41%)
Measles	1(1.41%)
Monkeypox	1(1.41%)
Seasonal Influenza (flu)	17(23.94%)
Other	2(2.82%)
I do not feel threatened by any of these diseases	19(26.76%)
	*71 responses

Figure 1: Summary of respondent's confidence towards the handling of a future pandemic both by other individuals in the U.S. and the U.S. Government

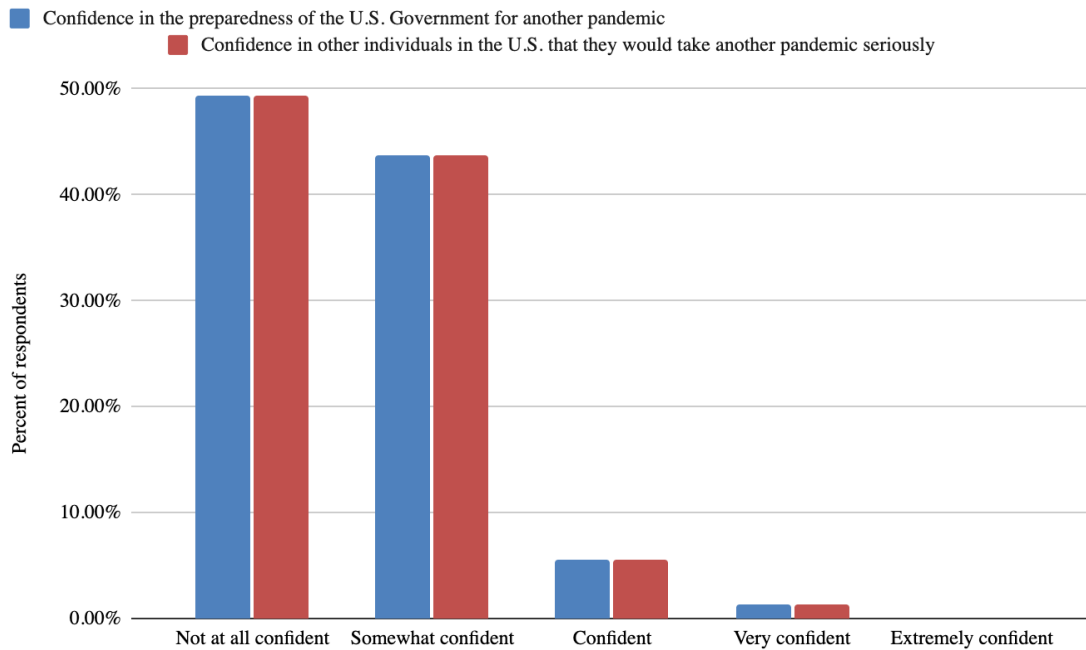
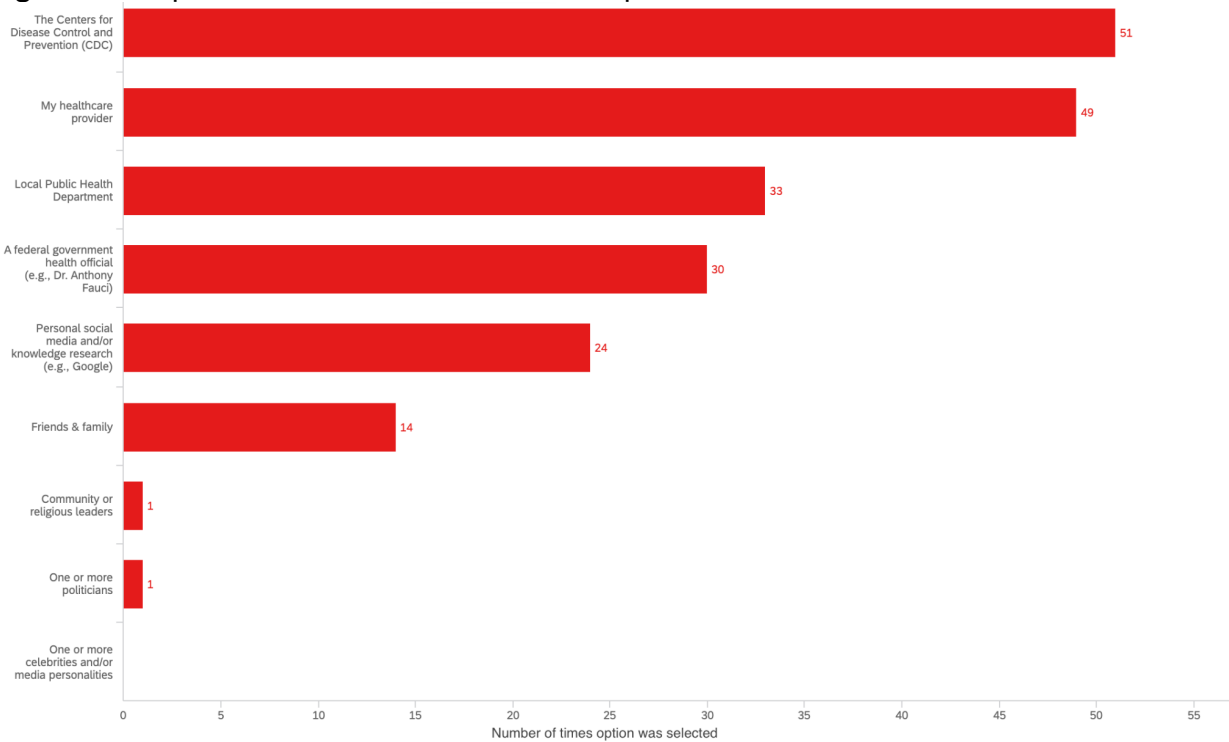


Figure 2: Respondents most trusted sources for public health information



References

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