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Scientific Report on COVID-19 Exposure

Objective:

The objective of this study was to evaluate COVID-19 infection, COVID-19 vaccination, and booster rates, and to assess COVID-related beliefs and attitudes in a small convenience sample of US adults. The survey aims to better understand current thinking and the concerns of the study population and their confidence in the pandemic response. The data generated from this study can help guide future public health responses to pandemics.

Methods:

An observational cross-sectional study was conducted to evaluate COVID-related infection, vaccination, and other self-protective behaviors and attitudes about the US response to the pandemic. The survey was distributed by a research team comprised of public health graduate students. Using different media platforms such as WhatsApp, GroupMe, and emails, the link to the survey was sent to members of the team's network. Participants were self-selected using a non-probability sampling method, snowballing, and a convenient sampling method. The study used a cross-sectional design. Data were collected using a self-administered online platform, Qualtrics, using a short 5-minute survey, which was pre-tested to ensure the appropriateness and timing of the survey. Participation in this study was entirely voluntary and confidentiality was maintained. The survey consisted of 21 multiple-choice items that included sample demographics, education status, COVID exposure, COVID-related complications, vaccination, future public health recommendations, other related health issues associated with COVID, and trust in the government's handling of COVID. A final total of 101 valid, completed surveys were returned. For this study, data were analyzed using simple descriptive statistics.

Results:

In this spring, 2023 COVID-19 survey data were collected from 101 participants, all living in the United States. Most respondents were between 25-34 years old (41.4%), non-Hispanic (77%), White (64.7%), and women (64%), with a majority (82%) reporting at least a bachelor's degree. Most participants (95%) had received the vaccine, and many (84%) had received at least one booster dose. The majority of participants still found COVID as the biggest threat to their health (38%) and half (50%) believed that the US government is be ill-prepared for a future pandemic. Participants were most likely to report receiving their public health information from their healthcare providers (25.3%) and the CDC (24.9%). Over half of the participants (52%) believed they have been infected with COVID-19 four or more times.

Discussion:

Survey results (see Table 1) indicate that the vast majority of participants (95%) were not only willing to be vaccinated but also willing to receive at least one booster vaccine (84%) to further their protection from the virus implying that the majority of participants were worried about their health, to some extent. These high vaccination results could also be attributed to the vaccine requirements of their school programs. The results from this study also indicate that despite these high vaccination rates, which presumably are protective, many participants were still concerned about personally contracting COVID-19. Indeed, over 50% reported that they had been infected an astounding four times. We cannot know from our survey whether these infections predated the availability of the vaccine or not. The vaccine has been shown to be protective and to lessen the risk of severe complications and death. Despite the high rate of previous infections with COVID and the very high vaccination rates, of participants reported that COVID was currently with 29% reporting COVID as "no threat." Additionally, 25% of the sample reported that they had never been diagnosed with COVID, and only 10% believed that

they had never had it, indicating the possibility of underreporting in COVID cases. Participants in our survey also reported low levels of

Conclusion:

Based on the results of our study, we draw the conclusion that the majority of participants consider the COVID-19 pandemic to be one of the greatest threats to their health and have taken the necessary precautions (i.e., adhering to the recommendation to extend protection, receiving a vaccination and at least one booster shot) to stop the spread of COVID-19. Future research should involve randomized surveys of people with different socioeconomic and demographic backgrounds in order to lessen or remove the study's biases. To build on our study's findings and guide future public health initiatives and policies focused at preventing COVID-19's spread, more research is required. confidence in the U.S. government's ability to handle such events in the future. The majority (91%) of participants were "Not confident at all" or Somewhat confident" in the government's level of preparedness for the next pandemic event. Most of the study participants gathered their public health-related information from their healthcare providers and the CDC.

There were several limitations of this study, including the limited size sample and the lack of representativeness, as this was not a random sample, but a purposive and convenience one, as such, most of the respondents had ties to the study investigators. The sample, therefore, was biased towards participants who were younger, highly educated, and mostly from the tri-state area. Another potential bias of this study, previously, mentioned may be associated with vaccination mandates for many students.

Conclusion:

Based on the results of our study, despite high infection and vaccination rates, which presumably would result in a highly protected sample, a sizeable proportion reported that the COVID-19 pandemic remains one of the greatest threats to their health. Many participants have taken the necessary precautions (i.e., adhering to the recommendation to extend protection, by receiving at least one booster shot) to protect themselves as well as stop the spread of COVID-19. Future research should involve randomized surveys of people with different socioeconomic and demographic backgrounds in order to lessen or remove the study's biases. To build on our study's findings and guide future public health initiatives and policies focused at preventing COVID-19's spread, more research is required.

Results Table

Question	**Answer (# Participants)**	**Percentage**
Have you been vaccinated with at least 1 dose of the COVID-19 vaccine?	Yes (95) No (5)	Yes (95%) No (5%)
Have you been vaccinated with any of the COVID-19 vaccine boosters?	Yes (84) No (16)	Yes (84%) No (16%)

Have you ever been informed that you had or showed symptoms of COVID-19?	Yes- health professional (20) No (25) Don't Remember (2) Yes- Rapid/PCR home test (28) Yes- Both (25)	Yes- health professional (20%) No (25%) Don't Remember (2%) Yes- Rapid/PCR home test (28%) Yes- Both (25%)
Which of the following diseases do you currently view as the biggest threat to your health in 2023?	COVID (38) Ebola (5) Measles (1) Seasonal Influenza (18) Monkeypox (4) None (29) Other (4)	COVID (38%) Ebola (5%) Measles (1%) Seasonal Influenza (18%) Monkeypox (4%) None (29%) Other (4%)
How confident are you that the US government is currently prepared for another pandemic?	Not confident at all (50) Somewhat confident (41) Confident (8) Very confident (1) Extremely confident (0)	Not confident at all (50%) Somewhat confident (41%) Confident (8%) Very confident (1%) Extremely confident (0%)
Who is your most trusted source for public health information?	Healthcare provider (59) Family (18) CDC (58) Government health official (35) Local health department (32) Celebrities (0) Politicians (1) Community Religious Leaders (3) Personal social media/research (27)	Healthcare provider (25.3%) Family (7.7%) CDC (24.9%) Government health official (15.0%) Local health department (13.7%) Celebrities (0%) Politicians (0.4%) Community or Religious Leaders (1.3%) Personal social media/research (11.6%)
Since the start of the pandemic in the US (early spring of 2020) how many times do you think you had COVID-19?	0 (10) 1 (8) 2 (20) 3 (10) 4 (52)	0 (10%) 1 (8%) 2 (20%) 3 (10%) 4 (52%)