

# Perceptions of the COVID-19 Vaccine within the Sudanese American Community

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## Introduction

- The WHO defines *Vaccine Hesitancy* as delay in acceptance or refusal of vaccination despite availability of vaccination services and recognized it as one of the top 10 global health threats in 2019.<sup>1</sup>
- COVID-19 vaccination rates for the US and Sudanese populations were 78% and 15%, respectively, and studies from both countries have identified hesitancy toward behaviors to protect from COVID-19.<sup>2,3,4</sup>
- Previous studies with Sudanese Americans have demonstrated low levels of health education.<sup>5</sup>
- This project aimed to characterize Sudanese American perspectives on the COVID-19 vaccine, an area that had not been studied before.

## Methods

- An anonymous, online, cross-sectional survey was directed toward Sudanese Americans and distributed through their community leaders on social media groups\* in May 2022.
- The following data was collected in REDCap:
  - Demographics
  - COVID-19 vaccination status
  - Detailed motives for vaccination, hesitancy, and barriers to uptake
  - Likert scale measures of knowledge/attitudes toward COVID-19 vaccination
  - Sources of information on the COVID-19 vaccine
- Primary outcomes were self-reported COVID-19 vaccination rates.
- Secondary evaluation looked for significant differences between vaccinated and unvaccinated groups using Fisher's exact and chi-squared tests.

\*The Sudanese American Public Affairs Association and the Omaha Sudanese American Community Organization

## Results

- Our survey received 111 responses; 4 responses were excluded for failing to meet inclusion criteria. Of 107 respondents, our sample demonstrated **93% vaccine uptake**, with the primary motivation being to protect oneself from disease (64%).
- The most cited reason for hesitancy was a belief **“it had not been studied enough,”** with 9/14 possible responses selected at least once.
- Motivations for vaccine hesitancy could not be analyzed due to sample size constraints.
- Associations with vaccine uptake shown in **Table 1** below.
- Figure 1 (right)** demonstrates differences between vaccinated and unvaccinated groups responses to 3 Likert Scale questions

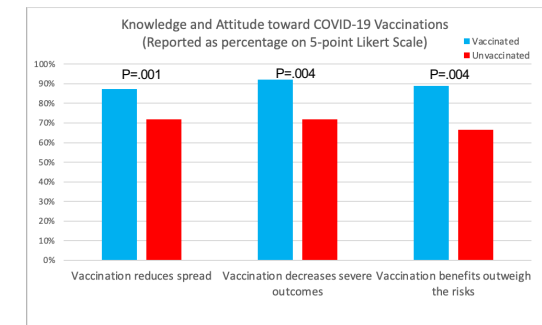
Table 1. Selected Associations with Vaccine Uptake

Association	Received Vaccination	Did not receive vaccination	Fisher's Exact (χ <sup>2</sup> )
<b>Highest Education</b>			<b>.013*</b>
Less than high school	0	1 (12.5)	
High school	12 (12.12)	2 (25)	
University/Bachelor's	37 (37.37)	4 (50)	
Post-graduate	50 (50.51)	1 (12.5)	
<b>Previous State in Sudan**</b>			<b>.045*</b>
Khartoum	70 (71.43)	4 (50)	
Non-khartoum district	22 (22.22)	4 (50)	
None	6 (6.12)	0	
<b>Report knowing a relative deceased due to COVID-19</b>			<b>.038*</b>
Yes	74 (74.75)	3 (37.5)	
No	25 (25.25)	5 (62.5)	
<b>Report previously refusing a vaccine</b>			<b>.627</b>
Yes	88 (88.89)	7 (87.5)	
No	11 (11.11)	1 (12.5)	
<b>Plan to vaccinate their own children</b>			<b>.038*</b>
Yes	62 (62.63)	2 (25)	
No	19 (19.19)	2 (25)	
I do not have children	18 (18.18)	4 (50)	
<b>Primary source of information on the COVID-19 Vaccine</b>			<b>.088 (13.78)*</b>
Official Government sources	46 (46.46)	2 (25)	
Social Media	8 (8.08)	4 (50)	
Mass Media	22 (22.22)	1 (12.5)	
Public Health/Hospital Sources	7 (7.07)	0	
Health Personnel	10 (10.10)	1 (12.5)	
Social Connections	3 (3.03)	0	
Other	3 (3.03)	0	
<b>Social Media Use</b>			
Facebook	76 (76.76)	7 (87.5)	.68 (.49)
Twitter	46 (46.46)	3 (37.5)	.724 (.2396)
Instagram	33 (33.33)	5 (62.5)	.129 (.275)
Whatsapp	92 (92.92)	8 (100)	1.00 (.61)
Other	8 (8.08)	1 (12.5)	.517 (.1876)

\*Based on p-value <.05

\*\*Reported based on regions to condense the tables but recorded by individual states in the survey.

Figure 1. Knowledge and Attitude toward COVID-19 Vaccinations by vaccination status as measured by questions on a 5-point Likert Scale.



## Conclusions

- This sample of Sudanese Americans reported high levels of vaccine uptake.
- Lack of trust and source of information could be primary factors in a multifactorial model contributing to COVID-19 vaccine hesitancy.
- Limitations include sample size, response bias, and sampling bias towards high educational attainment.

## References

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