#P21

Perceptions Regarding Intent and Hesitancy of the COVID-19 Booster Vaccine Among the NYC Vaccinated Population

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INTRODUCTION

- Although many believed the COVID-19 pandemic's impact on morbidity and mortality would cease with the creation of a COVID-19 vaccination, previous studies indicate vaccine (Mercadante & Law, 2020) and subsequent booster hesitancy (Yadete et al., 2021).
- Vaccine hesitancy is defined as the decision to delay or refuse vaccination despite its availability (Thompson et al., 2021).
- In order to address the notion of continued immunity, it is important to investigate factors attributing to perceptions of booster intent or hesitancy in New York City, an early epicenter of COVID-19 transmission due to its robust population in compact distribution (Thompson et al., 2021).

PURPOSE

- The purpose of this exploratory study is to investigate the potential social and environmental factors influencing perceptions of booster vaccine intent or hesitancy in the fully COVID-19 vaccinated NYC population.

METHODS

- Wagner IRB approval was granted on December 3, 2021.
- An *a priori* power analysis was performed using G-power Version 3.1.9.7. (Germany) revealing that the minimum sample size needed to achieve significance was **124** participants.
- An electronic survey was distributed through Qualtrics XM (Provo, Utah) via social media, email and text messaging.
- Sample size was ***N = 160.***
- Data were analyzed with IBM SPSS version 28.0.01 (IBM, Armonk, New York) with an alpha level set at 0.05.

Inclusion Criteria
- Those who have received two previous doses of Moderna or Pfizer or one dose of Johnson & Johnson at least two weeks prior.
- Current resident of any of the five boroughs of NYC.
- Fully completed survey.

Exclusion Criteria
- Those who have not received two previous doses of Moderna or Pfizer or one dose of Johnson & Johnson at least two weeks prior.
- Not a current resident of any of the five boroughs of NYC.
- Incomplete survey.

RESULTS

Table 1. *Demographics of sample (**N = 160**)*

Demographic	*n*	Percent
Gender / Female	110	68.8
Age / 18-24	102	67.3
Ethnicity / Caucasian	141	88.1
Coronavirus news / Social Media sites	37	23.1
Borough of NYC / Staten Island	97	60.6
Pre-existing conditions / No	116	72.5
Influenza Vaccination Status / Vaccinated	113	70.6
Infected with COVID-19 / No	76	47.5

Table 2. *Chi-square analysis of survey items*

Null Hypothesis	Test	Significance
Items 1 - 50	One-sample Chi-square	$p < 0.05$

Figure 1. *Belief that vaccinations are effective*

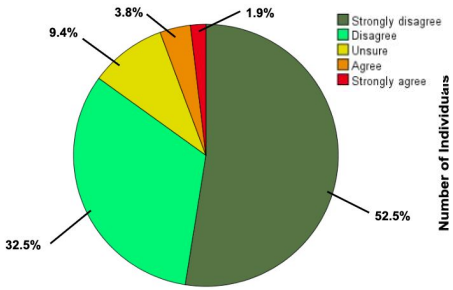

Figure 2. *Belief the booster probably would not work*

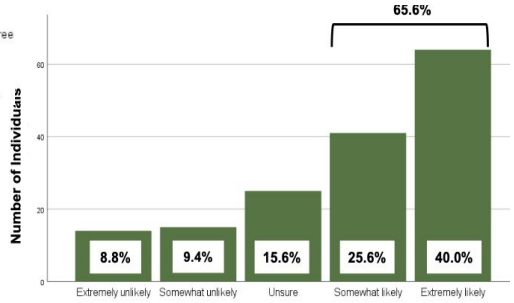

Table 3. *Spearman rho correlations between variables*

* $p < 0.05$

	Non-compliant individuals will infect others	Vaccines are effective	Public authorities decide in our best interest	Protecting the immuno-compromised	Vaccines protect the community
Not effective	**– 0.551 ***	**– 0.687 ***	**– 0.529 ***	– 0.548 *	– 0.609 *
Natural vs vaccine immunity	– 0.497 *	– 0.632 *	– 0.434 *	**– 0.578 ***	**– 0.624 ***

CONCLUSIONS

- The most common factors that influence the decision to receive the COVID-19 booster among vaccinated people in NYC include (1) booster vaccine efficacy, (2) natural immunity vs. vaccine immunity, (3) booster vaccine side-effects and safety, and (4) potential allergic responses to the vaccine.
- The majority of respondents would decline the COVID-19 booster vaccine.

PUBLIC HEALTH RELEVANCE

These data highlight specific topics that prevents individuals from accepting the COVID-19 booster vaccine and outlines areas where there is a lack of knowledge. With this information, public health officials can counsel people appropriately, and thus increase the likelihood of COVID-19 booster vaccine acceptance.

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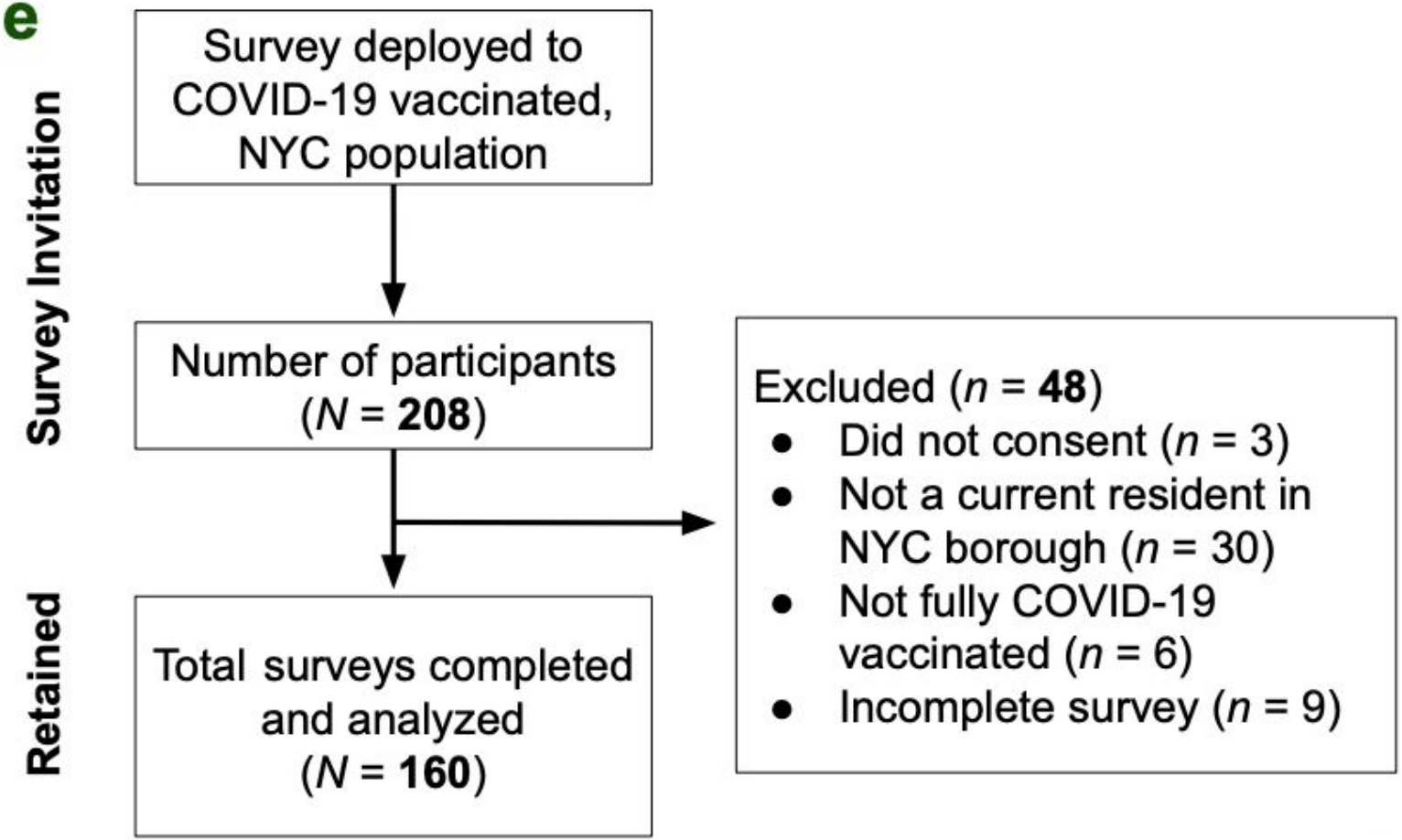
Sample


Survey Invitation
Survey deployed to COVID-19 vaccinated, NYC population
Number of participants (N = 208)
Excluded (n = 48)
Did not consent (n = 3)
Not a current resident in NYC borough (n = 30)
Not fully COVID-19 vaccinated (n = 6)
Incomplete survey (n = 9)
Retained
Total surveys completed and analyzed (N = 160)

Reliability Analysis

Table 4. *Cronbach's Alpha Scores for Measurement Models*

Measurement models	Items	Cronbach's alpha
Vaccine Conspiracy Beliefs	20	.714
CoBQ-5C	30	.742

Correlations

Table 7. *Spearman rho Correlation: Demographics and perceived benefits towards the booster vaccine*

	Vaccines are effective	Vaccines are safe	Protecting the immunocompromised	Vaccines are useful for me	Fully understand the vaccine	Weigh benefits and risks	Vaccines are preventive actions
Gender	**–0.185 ***	–0.118	–0.119	**0.233 ***	**0.174 ***	**0.215 ***	–0.086
NYC Borough	–0.019	–0.099	–0.048	–0.085	**0.177 ***	0.038	–0.074
Household Income	–0.010	0.053	0.001	–0.139	**–0.173 ***	**–0.186 ***	0.010
Education	**–0.192 ***	–0.144	–0.078	–0.032	0.009	–0.064	–0.133
Flu Status	**–0.232 ***	**–0.282***	**–0.279 ***	**0.198 ***	0.121	0.148	**–0.237 ***
COVID-19 infection	**–0.195 ***	–0.147	**–0.162 ***	**0.206 ***	**0.216 ***	0.139	**–0.167 ***

* $p < 0.05$ (2 tailed)

Correlations

Table 8. *Spearman rho Correlation: Demographics and perceived barriers towards the booster vaccine*

	Dangerous side effects	Allergy	Not effective	Natural vs vaccine immunity	I am healthy	I hate needles and injections	Past COVID-19 infection	I am young	Good prognosis
Gender	0.08	0.074	**0.166** *	0.141	0.036	–0.117	0.124	–0.003	0.059
Age Range	**0.319** *	**0.174** *	0.150	**0.272** *	**0.252** *	0.011	**0.275** *	**0.424** *	**0.291** *
Ethnicity	–0.120	–0.069	**–0.158** *	–0.089	**–0.191** *	–0.020	–0.128	-0.132	0.057
Education	**0.275** *	**0.185** *	**0.174** *	**0.258** *	**0.192** *	0.040	**0.166** *	**0.266** *	0.102
Pre-existing conditions	0.069	–0.053	**0.162** *	**0.194** *	**0.380** *	–0.020	**0.262** *	**0.426** *	**0.297** *
Flu Status	**0.338** *	**0.239** *	**0.259** *	**0.318** *	0.065	0.080	**0.174** *	0.031	–0.015
COVID infection	**0.203** *	0.154	**0.236** *	**0.320** *	0.133	0.016	**0.669** *	**0.228** *	**0.211** *

* $p < 0.05$ (2 tailed)

Correlations

Table 9. *Spearman rho Correlation: Instrument comparison*

	Non compliant individuals will infect others	Large gatherings increase risk	Increased difficulty for self care during pandemic	Vaccines are effective	Public authorities decide in our best interest
Dangerous side effects	**–0.439 ***	**–0.325 ***	**–0.166 ***	**–0.580 ***	**–0.444 ***
Allergy	**–0.277 ***	–0.122	–0.135	**–0.386 ***	**–0.235 ***
Not effective	**–0.551 ***	**–0.401 ***	**–0.279 ***	**–0.687 ***	**–0.529 ***
Natural vs vaccine immunity	**–0.497 ***	**–0.379 ***	**–0.227 ***	**–0.632 ***	**–0.434 ***
I am healthy	**–0.352 ***	**–0.376 ***	**–0.216 ***	**–0.315 ***	**–0.296 ***
I hate needles and injections	0.106	**0.209 ***	**0.181 ***	–0.004	0.003
Past COVID-19 infection	**–0.388 ***	**–0.253 ***	**–0.265 ***	**–0.396 ***	**–0.327 ***
I am young	**–0.419 ***	**–0.372 ***	**–0.285 ***	**–0.387 ***	**–0.295 ***
Good prognosis	**–0.307 ***	**–0.355**	**–0.226 ***	**0.212 ***	**–0.176 ***

* $p < 0.05$ (2 tailed)

Correlations

Table 10. *Spearman rho Correlation: Instrument comparison*

	Protecting the immunocompromised	Vaccines protect the community	My immune system is strong	Vaccine preventable diseases are not severe
Dangerous side effects	**–0.510 ***	**–0.508 ***	**0.188 ***	**0.472 ***
Allergy	**–0.397 ***	**–0.339 ***	**0.159 ***	**0.354 ***
Not effective	**–0.548 ***	**–0.609 ***	**0.185 ***	**0.416 ***
Natural vs vaccine immunity	**–0.578 ***	**–0.624 ***	**0.247 ***	**0.457 ***
I am healthy	**–0.354 ***	**–0.386 ***	**0.458 ***	**0.347 ***
I hate needles and injections	0.131	0.123	–0.133	**–0.158 ***
Past COVID-19 infection	**–0.364 ***	**–0.371 ***	**0.156 ***	**0.340 ***
I am young	**–0.409 ***	**–0.411 ***	**0.429 ***	**0.412 ***
Good prognosis	**–0.219 ***	**–0.225 ***	**0.364 ***	**0.181 ***

* $p < 0.05$ (2 tailed)

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