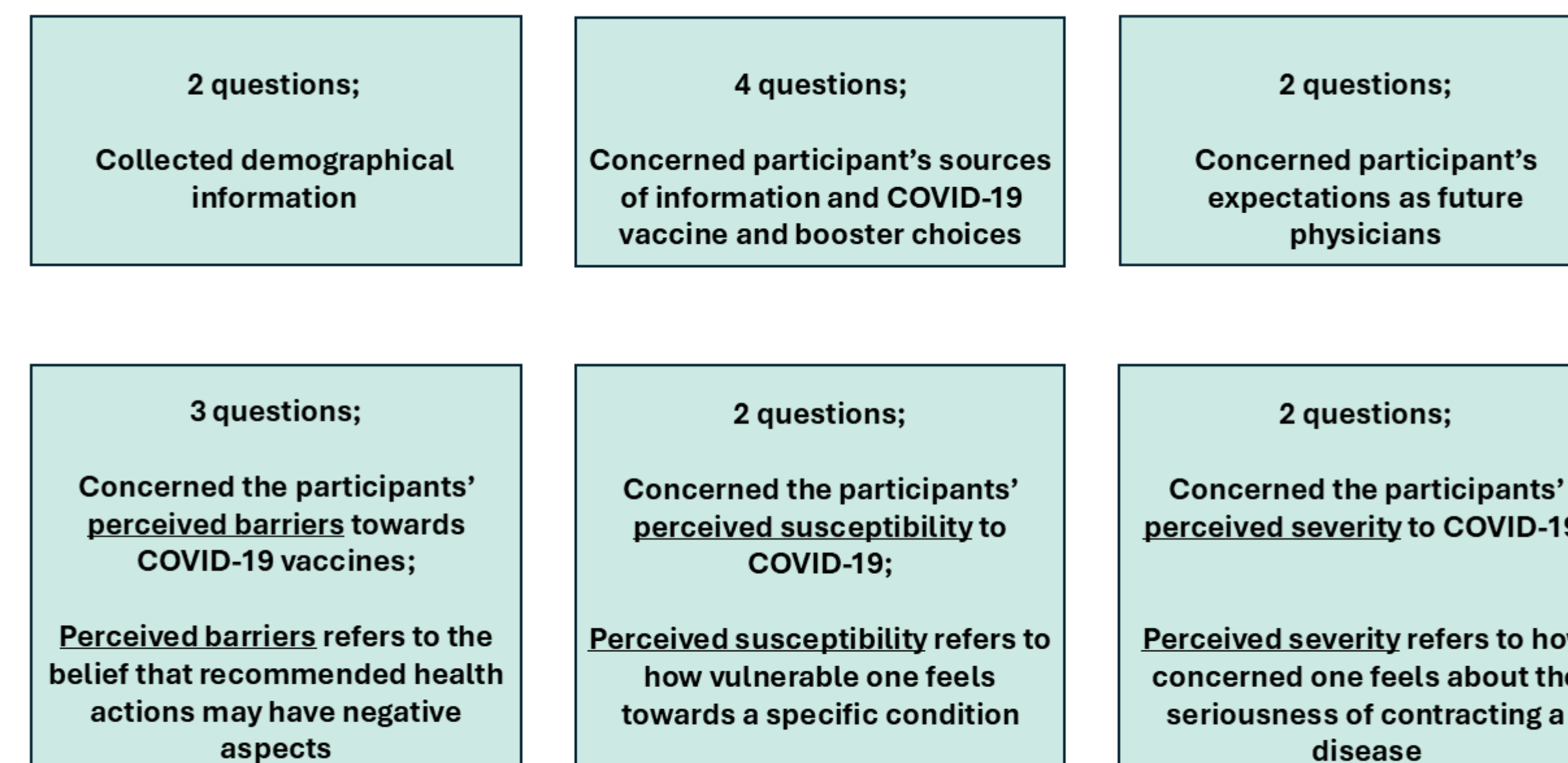


Abstract

To better understand the ways future physicians form educated views, this study investigated the ways they informed themselves on the COVID-19 vaccines, their vaccine choices, and their self-reported role of perceived risk factors. A 15-question online survey was conducted to collect data from pre-medical students who aspired to matriculate into medical school. The response rate was 57.38% (35 participants). 94.3% (33) of respondents received the COVID-19 vaccine and 68.6% (24) received booster shots. Of these respondents, two received neither vaccines or boosters and nine elected to receive vaccines but no booster shots. Participant groups that did not receive vaccines or booster shots indicated that they generally had increased perceived barriers (belief that receiving the treatment may have negative aspects), compared to their respective contrasting participant groups that did receive vaccines or booster shots. By better understanding how physicians consume information on emerging biomedical technologies, the scientific community can better prepare to educate a primary driver of vaccine adoption before the next pandemic occurs.

Methodology

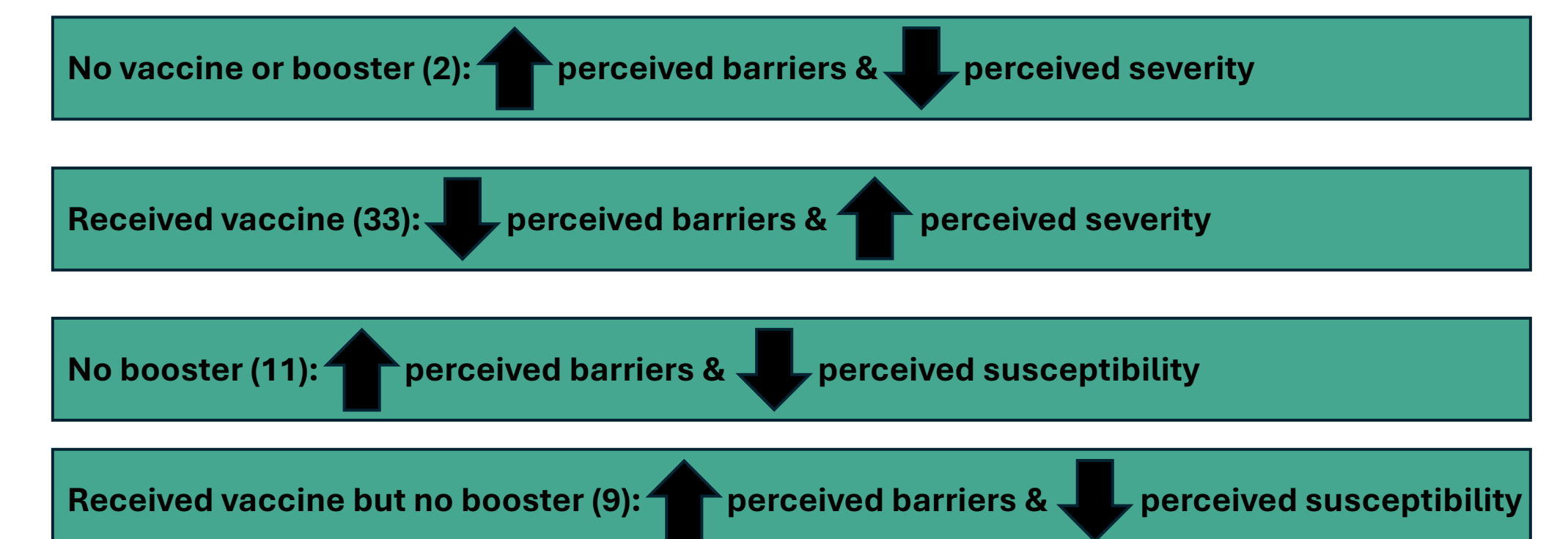
- This study relied on a 15-question Institutional Review Board approved online Google Forms survey delivered to a class of 61 pre-medical post-baccalaureate students at Nova Southeastern University who all aspired to matriculate into a medical school the following academic year.
- The 15 questions included in the survey are composed of six question groups, three of which correlate to individual dimensions of the Health Belief Model (HBM).



- The 4th dimension of the HBM (perceived benefits) was not included in the survey questions, it was assumed all participants that received the vaccines saw a high value in this intervention.
- Studies implementing the HBM frequently found perceived barriers to be the dimension that most significantly influences health-related behaviors.
- At the conclusion of data collection, the study had a 57.38% response rate, or 35 out of 61 potential participants.

Conclusions

- A majority of respondents (57.1%) answered that the primary source contributing towards their COVID-19 vaccination decision was either their undergraduate coursework, discussion with medical professionals, educational advertisements from a Governmental agency, or personal readings and research on vaccine studies; which are all different sources of “mainstream information”.
- Question two (pictured in the results section), which collected data on all sources the participants’ consulted, found similar results to question three (above), only differing by including discussion with non-family peers as the fifth most popular choice.
- This difference may allude to participants’ willingness to consider their peers’ opinions, though when forced to limit their sources they choose to defer to more explicitly educated, informed, or mainstream sources of information.
- Each of the four cable news answer choices were selected by less than 15% of participants in question two and by no participants in question three.



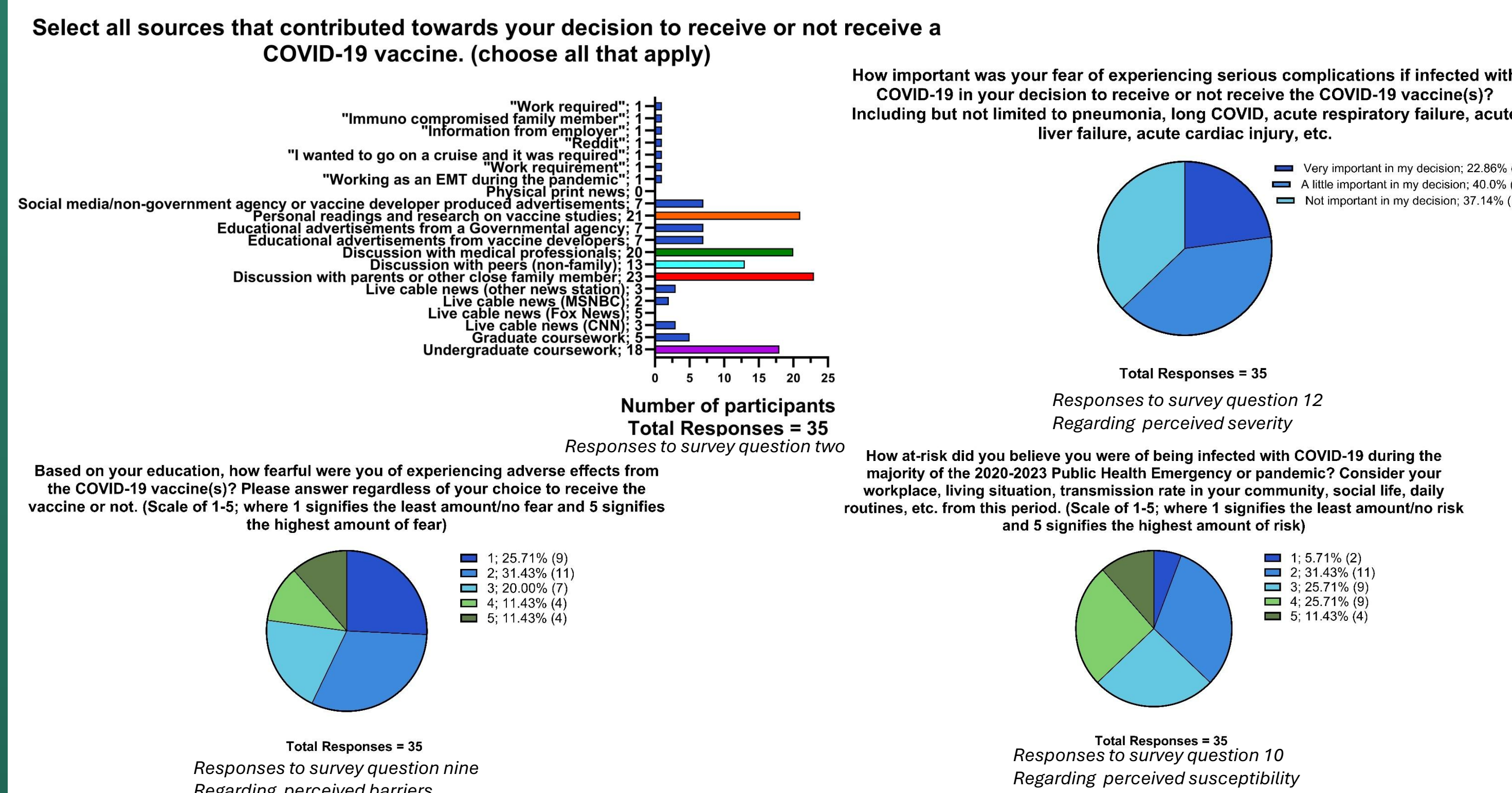
- Groups with increased perceived barriers elected not to receive the COVID-19 vaccines and/or booster shots, suggesting a direct relationship.
- With a low concern of contracting COVID-19 (perceived severity), they would be less motivated to get the vaccine or booster shots.
- With a low expectation of serious COVID-19 infection (perceived susceptibility), they may find other factors that are enough to motivate only receiving the vaccine.

Introduction

- During the 2020-2023 Public Health Emergency vaccine development was novel due to the use of mRNA technologies in a human vaccine and its expedited development processes.
- Education and messaging on the COVID-19 pandemic, transmission, vaccine safety, and other relevant topics presented unique challenges.
- Most of the public had never considered vaccines in terms of decreasing one’s chance of severe disease, diminishing transmission, or reducing mutation rates, and had difficulty accepting the perceived risks of vaccination in return for these more abstract and circumstantial benefits.
- Populations prone to vaccine hesitancy were often confused and stressed by these new considerations.
- As the “century’s worst infectious disease” ran its course, the public was challenged by numerous firsts on which they were typically ill-equipped to properly evaluate and make informed decisions on.
- During the pandemic individual physicians often remained trusted by the public while trust in pharmaceutical agencies and the government fell.
- Accurate risk perception is central to developing appropriate and healthy behaviors. In other words, “when a subject is aware of his actual risk for a condition, he is more likely to adopt appropriate behaviors to reduce the risk”.
- The Health Belief Model (HBM) was consulted as a health model and framework to consider this study’s results.
- The HBM consists of 4 dimensions and was constructed in the 1950s to explain the failures “of people to accept disease preventives or screening tests for the early detection of asymptomatic disease” and shortcomings in prescription compliance.

Results

- Of the 35 respondents, 94.3% received a complete dose of the COVID-19 vaccine(s) and 68.6% received COVID-19 booster shots.
- The most common answers for the single primary source contributing to participants’ decision to receive or not receive a COVID-19 vaccine were discussion with parents or other close family member (28.6%), personal readings and research on vaccine studies (25.7%), discussion with medical professionals (17.1%), undergraduate coursework (11.4%), and other (a write-in answer option), where participants explained it was required by their employer (11.4%).



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