

Post-COVID-19 Pandemic Risk Perception and Vaccine Booster Confidence in Recife, Pernambuco, Northeast Brazil

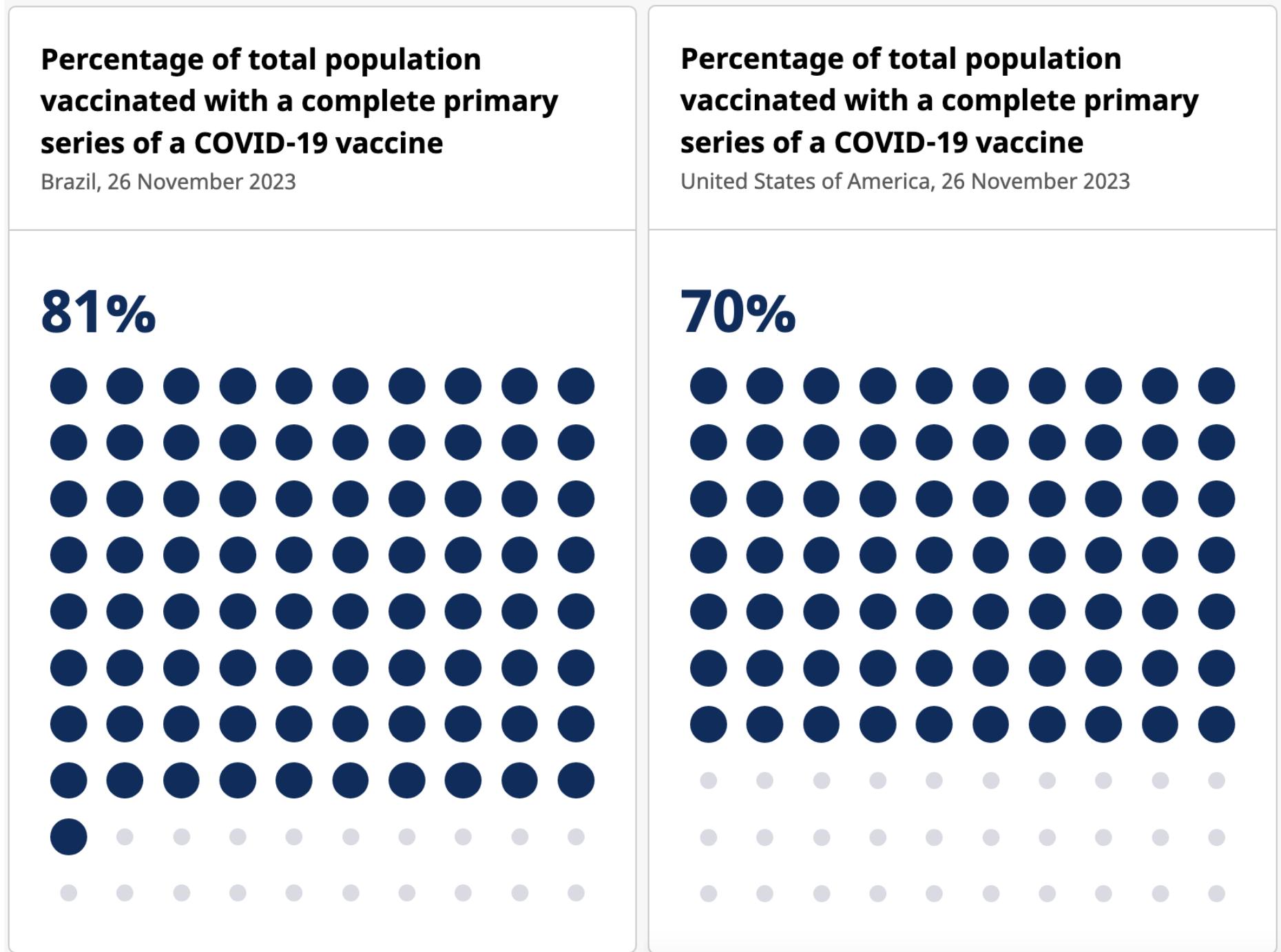
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Introduction and Background

The COVID-19 pandemic, declared a global crisis by the WHO in March 2020, had profound impacts worldwide, with Brazil facing severe challenges. Brazil's response included a significant vaccination campaign, making it one of the countries with the highest vaccination rates globally.



However, despite this achievement, Brazil also experienced the second-most fatalities globally, a paradox that highlights the complexities of managing public health crises.

Number of COVID-19 deaths reported to WHO (cumulative total)

Brazil

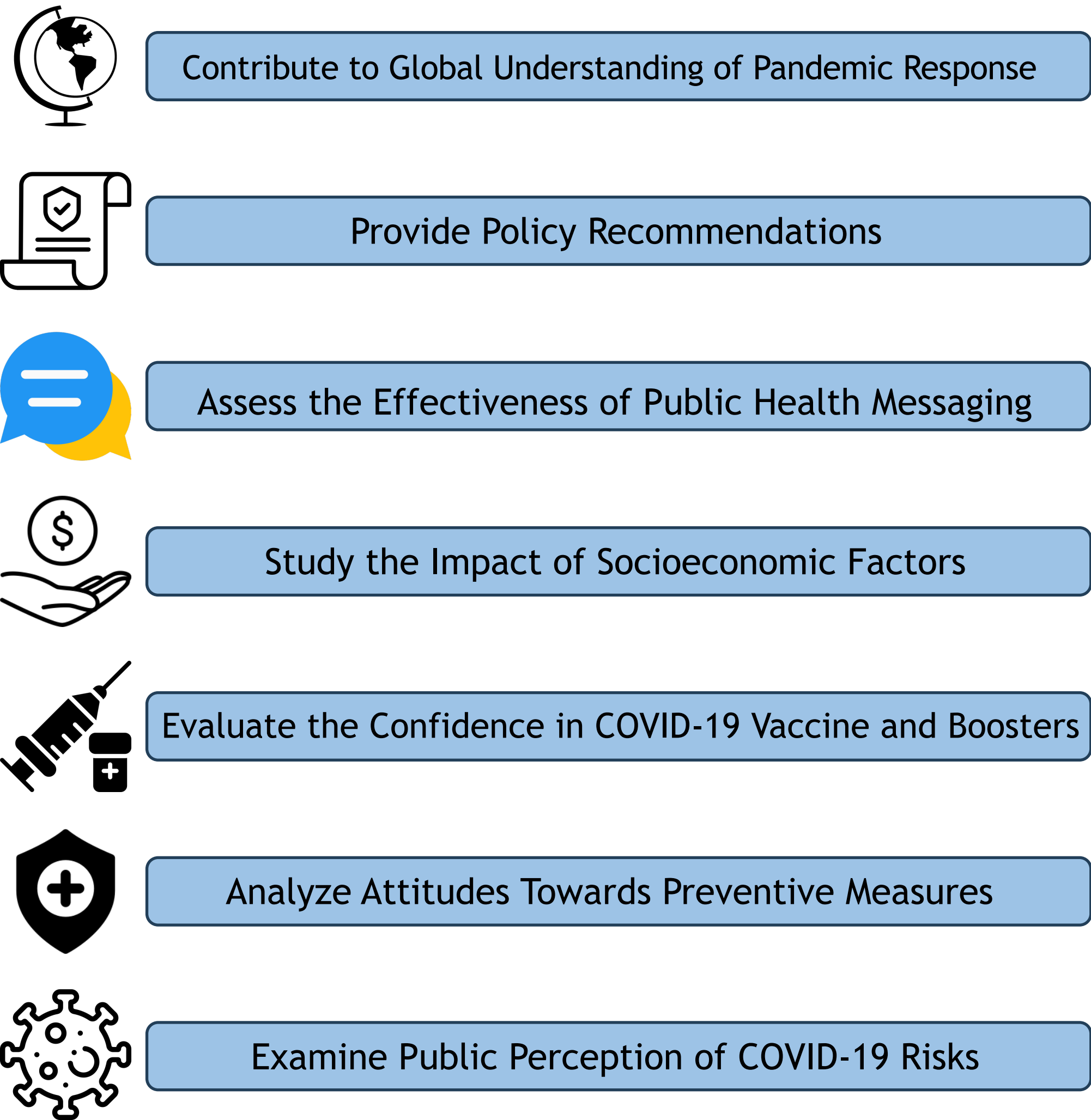
Country	Deaths
United States of America	1.2m
Brazil	702.1k
India	533.6k

The rollout of booster shots adds another layer to Brazil's pandemic response, with varying public perception and uptake rates. This poster presentation focuses on Recife, Pernambuco, examining the impact of booster doses on the pandemic's trajectory in Brazil and the critical role of sustained vaccination efforts in combating COVID-19. It explores the dynamics of vaccine reception, the importance of addressing vaccine hesitancy, and the implications of booster uptake on Brazil's public health outcomes.

Recife, the capital of Pernambuco in Northeast Brazil, is a region steeped in rich cultural history and biodiversity. Despite its dynamic urban landscape and being an economic hub, academic research in Recife has been limited. This paucity can be attributed to various factors, including historical underinvestment in research infrastructure, educational disparities that have restricted local academic development, and a focus on immediate socioeconomic challenges over long-term scholarly pursuits. The region's potential for contributing valuable insights to various fields of study still needs to be explored, presenting a compelling case for increased academic attention and resources.



Objectives



Methods

Study Period & Focus:

- Years Covered:** 2020-2024
- Objective:** Examine the reception of COVID-19 vaccine booster shots in Brazil, assessing the impact of vaccination coverage on booster uptake rates.

Search Databases:

- Platforms Used:** PubMed, SciELO, Google Scholar
- Criteria:** Comprehensive review of scientific publications related to COVID-19 and flu vaccines.

Search Strategy:

- Core Terms:** COVID-19 booster acceptance and hesitancy, regional differences within Brazil.
- Flu Vaccine Comparison:** Including flu vaccine literature in contrast with COVID-19 booster perceptions.
- Refinement:** Specific focus on Brazil's regional vaccine acceptance and hesitancy.

Selection Criteria:

- Study Types:** Meta-analyses, literature reviews, systematic reviews, clinical and randomized controlled trials.
- Relevance:** High-quality, peer-reviewed studies pertinent to vaccine hesitancy and acceptance in the Brazilian context.

Additional Research:

- Topics Covered:** Historical vaccination campaigns, pandemic responses, and vaccine distribution methods across Brazilian states.
- Purpose:** Explore socioeconomic, cultural, and political factors influencing vaccine reception.

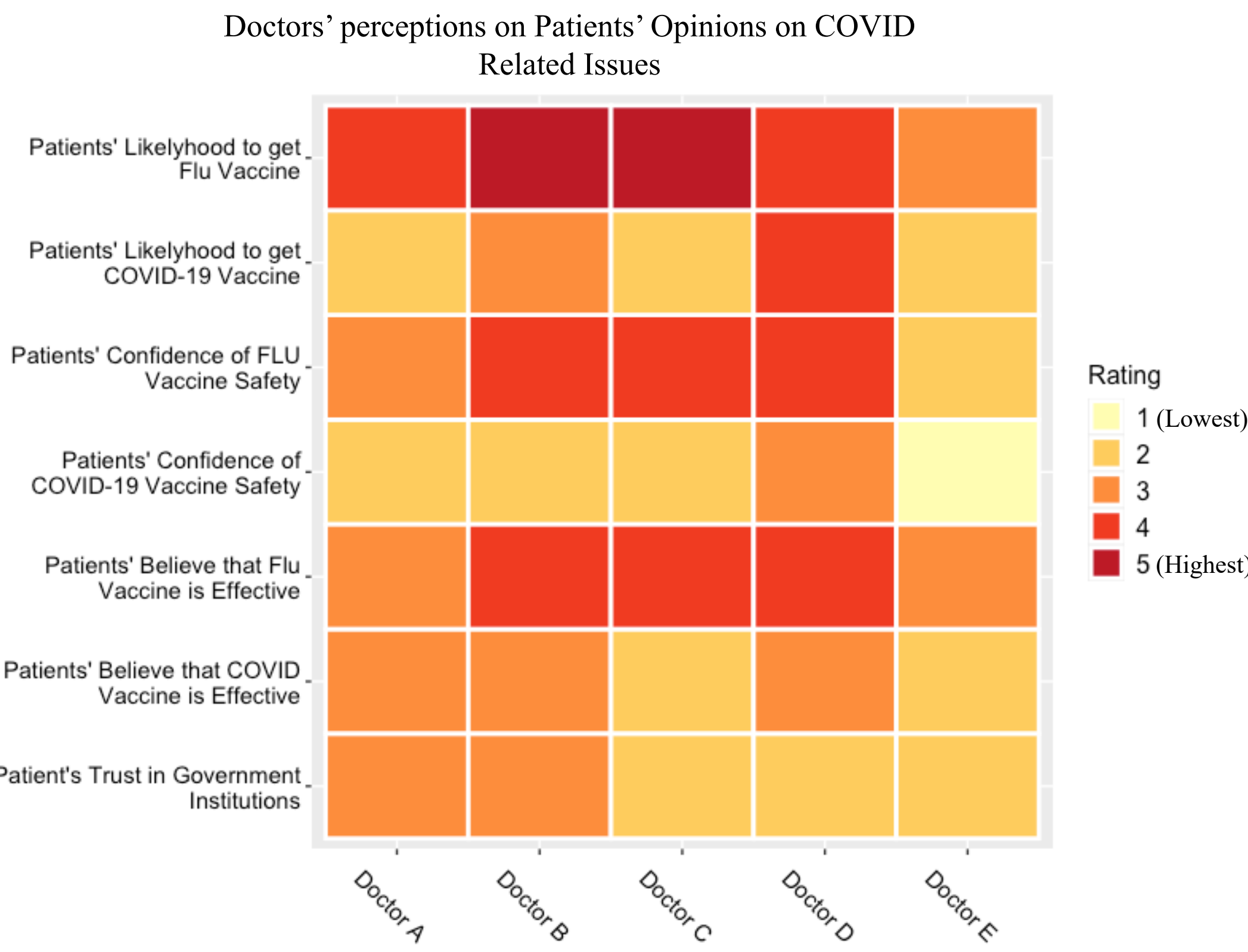
Results

1. Vaccine Acceptance Trends: Data extracted from the literature and public health records reveal a distinct trend of decreasing vaccine acceptance for COVID-19 and influenza vaccines among the Brazilian population. Initially, high uptake rates for the COVID-19 vaccine due to urgent public health campaigns began to wane as the immediate threat of the pandemic diminished. Similarly, influenza vaccine acceptance has traditionally been moderate but shows signs of decline, particularly among vulnerable groups like the elderly and those with chronic diseases. This decline in acceptance rates is attributed to several factors, including vaccine fatigue, misinformation, and the complexity of navigating booster recommendations amid evolving virus strains.

2. Vaccine Hesitancy Factors: Qualitative data highlight fears of side effects and doubts about efficacy, highlighting increasing vaccine hesitancy. Studies specifically point to persistent misinformation and a general mistrust of vaccine benefits. For the flu vaccine, hesitancy is further compounded by misconceptions about the severity of influenza, leading to underestimation of personal risk. For COVID-19, hesitancy factors include confusion over rapidly changing information and recommendations during the pandemic.

3. Impact of Political Polarization: Political polarization has emerged as a significant factor influencing vaccine acceptance in Brazil. The analysis shows that public attitudes towards vaccines increasingly correlate with political affiliations and trust in government. Regions and demographic groups that express higher levels of distrust towards the current administration or the global health authorities also exhibit lower vaccine uptake. This polarization is facilitated by social media, where politically charged misinformation can spread rapidly, influencing public perceptions and behaviors toward vaccination.

4. Conversations with Doctors: In a survey assessing vaccine perceptions among five doctors regarding their patients' perspectives on various COVID-19 related questions, the Likert scale data revealed higher confidence and likelihood of patient uptake for the influenza vaccine than the COVID-19 vaccine. Scores averaged higher for the influenza vaccine's safety and efficacy, establishing trust and acceptance. However, responses indicated a cautious approach toward the COVID-19 vaccine, with lower scores reflecting emerging concerns or uncertainties about its novel nature. Moreover, moderate trust in government institutions across all doctors suggests that political factors may influence vaccine confidence. These insights highlight the contrast in healthcare professionals' perceptions between a long-established vaccine and a newly introduced one amid political skepticism.



Conclusions

Expands Understanding of Pandemic Response Globally: Most research about Brazil originates from or examines São Paulo and Rio De Janeiro. The survey of doctors offers insights into healthcare professionals' critical role in shaping public perception during a health crisis in an academically neglected part of Brazil. Contributing to the discourse further shows the nuanced differences in the reception of established versus novel vaccines nationally and globally.

Established Trust vs. Novelty: Data across the board reflects greater trust exists in the well-established influenza vaccine than in the COVID-19 vaccine. However, the latter's novelty and evolving polarization contributes to hesitancy, underscoring the importance of clear, consistent communication about vaccine development and safety to improve uptake.

Socioeconomic Impact: Socioeconomic factors do impact vaccine acceptance. Targeted strategies are needed in underserved areas to ensure equitable vaccine distribution and address specific community concerns that may hinder vaccine uptake.

Attitudes Towards Preventive Measures: Attitudes toward preventive measures, including vaccines, are influenced by personal experiences with healthcare systems and trust in government institutions. Building personal connections between healthcare providers and patients can improve the acceptance of preventive measures.

Perception of COVID-19 Risks: Perceptions of COVID-19 risks are influenced by evolving information and political polarization, indicating a need for messaging that transcends political boundaries and focuses on the shared goal of community health and well-being.

Policy Recommendations: To invigorate academic research in Recife, Pernambuco, policies should focus on three key areas: Substantial funding should be channeled into building and enhancing research infrastructure, fostering synergies between academia, government, and industry. Educational outreach must be prioritized, offering scholarships and engaging the community to underscore the importance of scholarly work. Lastly, incentivizing research through financial benefits and grants can propel studies that address the region's unique challenges, ensuring that research efforts are both relevant and impactful.

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