

REVIEW ARTICLE

# Impact of the Wellness on the Hesitancy on the Omicron Vaccination

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## ABSTRACT

The emergence of the Omicron variant has posed significant challenges to the effectiveness of existing vaccines and antibody-based therapies in combating COVID-19. This systematic literature review examines the impact of wellness on vaccine hesitancy related to the Omicron variant. The review explores various factors influencing vaccine hesitancy, including demographic characteristics, health literacy, historical mistrust, and misinformation. The research investigates the role of clear and consistent messaging, trust-building measures, and collaboration among stakeholders in addressing vaccine hesitancy. The findings indicate that a considerable percentage of the population expresses vaccine hesitancy, particularly among younger individuals and females. The review concludes by discussing the implications of parental attitudes towards vaccinating children, the impact of confidence and collective responsibility, and the influence of various antecedents on vaccine hesitancy. The findings provide valuable insights for policymakers, healthcare professionals, and public health authorities to design effective strategies to address vaccine hesitancy and enhance vaccination rates, thus mitigating the impact of the Omicron variant and future variants.

**Keywords:** Wellness; Hesitancy; COVID-19; Coronavirus; Omicron; Vaccination.

## 1. Introduction

### 1.1 Background

The deployment of COVID-19 vaccines globally

has encountered a myriad of hurdles, ranging from affordability and supply chain issues to logistical complications, public confusion, and misinformation dissemination. This highlights the disparity in vaccine distribution, with high-income countries reach-

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ing substantial vaccination rates, including booster doses, in contrast to low and middle-income nations grappling with vaccine acquisition and the rollout of mass vaccination efforts <sup>[1]</sup>. The rise of new variants such as Delta and Omicron exacerbates the situation, presenting challenges for both well-vaccinated and poorly vaccinated communities by their capacity to bypass vaccine-induced immunity <sup>[2]</sup>. Additionally, the vaccination drive is further slowed by the hesitancy observed within the population, including among healthcare providers. It is noted that, despite the availability of vaccines, reluctance among some individuals and health professionals to get vaccinated persists <sup>[3]</sup>. This reluctance is shaped by multiple factors, including vaccine accessibility, health literacy, clear communication of information, evaluation of risks and benefits, a sense of collective versus individual responsibility, trust in healthcare systems, and personal or collective beliefs and values.

Prior to the SARS-CoV-2 pandemic and the creation of COVID-19 vaccines, initiatives aimed at enhancing vaccine acceptance and uptake were already underway. They articulate that the intensified push to vaccinate a broader segment of the populace against COVID-19 stems from a concern for public health and a longing to terminate the pandemic-induced limitations on personal freedoms and economic operations <sup>[1,2]</sup>. Vaccination has been promoted by authorities as a civic duty, especially among the younger and healthier demographic, who are less prone to suffer severe consequences or fatality in the absence of vaccination. In contrast, the pandemic has escalated into a contentious atmosphere, where political entities and figures have opposed compulsory vaccination and other public health strategies designed to mitigate the virus's spread, advocating for personal liberties <sup>[2]</sup>. The involvement of government and political forces is pivotal in tackling vaccine accessibility, reluctance, and opposition. The political ideology significantly influences the vaccination decision-making process among individuals <sup>[4]</sup>. A study indicates that areas in the United States with a higher density of Republican voters displayed reduced rates of COVID-19 vaccinations, alongside elevated

instances of COVID-19 infections and fatalities per 100,000 inhabitants <sup>[1]</sup>. This research further underscores the impact of race/ethnicity, education level, and poverty on vaccination rates, mediated by their correlation with political affiliations.

Since the development of vaccines, there has been ongoing debate about their role in ensuring community health and fulfilling societal obligations. It highlights that advocates believe vaccinations are essential for preserving public health and halting the transmission of contagious diseases <sup>[2]</sup>. They stress the significance of individual participation in achieving collective well-being through immunization <sup>[1]</sup>. Conversely, some individuals raise concerns over potential violations of personal rights and autonomy fearing that vaccination mandates might exacerbate social disparities by privileging the vaccinated over the unvaccinated <sup>[1]</sup>.

To encourage immunization, various governments have implemented goals and schedules linking the alleviation of lockdowns, international travel, and the reduction of limitations on social and economic activities to the vaccination rates within the populace <sup>[4]</sup>. These initiatives have encountered considerable opposition, leading to societal rifts. While some view these measures as vital for protecting public health, others call for the complete lifting of restrictions to revert to pre-pandemic conditions <sup>[3]</sup>. This division underscores the ongoing debate on finding the right equilibrium between public health protocols and individual liberties.

Vaccine hesitancy and reluctance are intricately linked to the disparities in vaccine distribution, particularly evident in lower- and middle-income countries (LMICs) and among demographic groups with restricted access to healthcare facilities <sup>[1]</sup>. Such communities frequently grapple with vaccine acquisition challenges, stemming from limited resources and insufficient health infrastructure. Interestingly, recent studies indicate a higher inclination towards accepting COVID-19 vaccines within LMIC populations than in wealthier nations, such as the United States, and upper-middle-income countries, including Russia <sup>[3]</sup>. This observation underscores the critical need

to focus vaccination initiatives in LMICs with populations that are open to vaccination, as it plays a pivotal role in enhancing worldwide vaccine uptake. Tackling the issue of low vaccine coverage in these areas is imperative, as it acts as a breeding ground for the development of new variants, like Delta and Omicron, which have shown a propensity to circumvent the immunity provided by vaccines, especially in the absence of booster shots or previous infection. Therefore, it is vital to integrate these insights into global strategies aimed at boosting vaccine coverage and reducing the threat posed by emerging variants.

## 1.2 Purpose

The present research article aims to present a systematic literature review on the impact of wellness on the hesitancy regarding the Omicron vaccination. While substantial reviews are cited in the literature to address the problem, they need to establish a correlation between the well-being and hesitancy on the uptake of the Omicron vaccination. This review shall present an understanding of the correlation that provides insights to realize spurious relations between human wellness and hesitancy to take Omicron vaccination.

## 2. Methodology

### 2.1 Protocol

The present study synthesizes insights from multiple research papers to examine the link between human well-being and reluctance to receive the Omicron vaccine. Following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines—a 27-item checklist essential for pinpointing pertinent studies—the research employed a method akin to PRISMA’s to create a three-phase flow chart, effectively focusing the research question. This investigation was conducted through a thorough review of the existing scientific literature.

### 2.2 Information sources

To conduct the research, we searched various

electronic databases, including Science Direct, Elsevier, PubMed, Google Scholar, Wiley Online Library, Taylor Francis, and Springer. We utilized keywords such as wellness, vaccination, COVID-19, hesitancy, and Omicron, along with Boolean operators (AND, OR) to search for articles based on age, gender, and demographics. For example, we conducted a search using the keywords hesitancy and Omicron to identify articles related to hesitancy and Omicron vaccination. We also filtered our search to include articles published between 2020 and 2023, given that COVID-19 is a recent pandemic and many authors have explored different research items on the phenomenon for the past three years. These databases also include public opinions and open-access data from various sources to provide a more comprehensive qualitative analysis while quantifying the data.

### 2.3 Search

The search process involved multiple databases, including Google Scholar and Wiley Online Library with the aforementioned key terms. However, filters were used to narrow down the search process to obtain relevant articles desired to be used in addressing the research topic. In all the databases, only articles authored in 2020–2023 were considered for selection. The data sources were also required to be journal articles to fulfill the pursuit of gathering peer-reviewed journal articles with reliable data for analysis.

### 2.4 Eligibility criteria

The eligibility criteria for the study were peer-reviewed scholarly articles authored between 2020 and 2023 that explored hesitancy towards the Omicron vaccination. This helped to narrow down the search to articles that were published within the past three years, and were of a high academic standard. The focus on Omicron hesitancy allowed the researchers to gain a deeper understanding of the factors contributing to this phenomenon and develop effective strategies to address it. The exclusion criteria for the study were articles that were not in the English language,

were not relevant to the field of public health or vaccination, did not provide enough data or information to be analyzed, or were retracted or withdrawn from publication. These criteria were used to ensure that the selected articles met the specific requirements of the study and provided reliable and accurate information on the impact of wellness on the hesitancy regarding the Omicron vaccination research topic shown in **Table 1**.

**Table 1.** Key search terms for eligibility criteria.

Key search terms-Boolean operators-Nature	Key search terms-Boolean Operators-Characteristics	Key search terms
Wellness AND Vaccination OR Omicron	During COVID-19 OR low uptake	Hesitancy AND Omicron vaccination

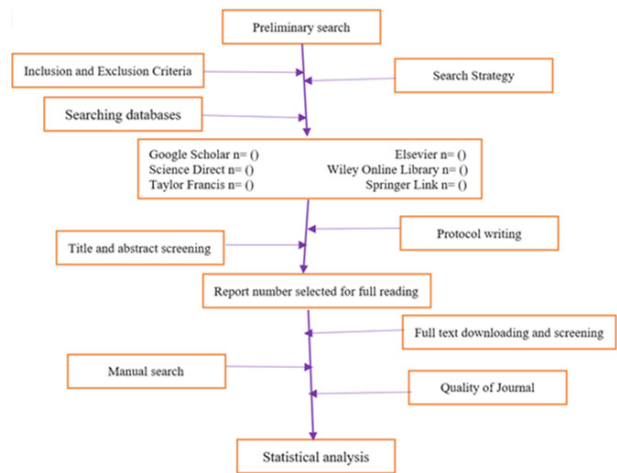
### 2.5 Study selection

To ensure the highest quality and reliability of the data, we utilized Google Scholar as our primary search engine, given its vast repository of literature. However, during our research, we also discovered several articles through other search engines. To begin, we conducted a thorough review of the titles and abstracts of all articles to filter out any non-relevant content. This process was labor-intensive but necessary to reduce the number of duplicated articles. The second step involved downloading the full text of the selected articles from free access websites or articles with open access on platforms such as Elsevier, when necessary. We also searched the reference lists of included articles for any additional relevant articles. For each article, we applied the following criteria set by the PRISMA: a) the method used to assess, b) the objectives, c) the nature of the study, and d) the observations from the outcomes.

### 2.6 Quality of the included articles

The assessment of the quality of the articles retrieved is crucial for a systematic literature review study. In this particular case, quality assessment ensured the accuracy of the findings from the included

papers. Given that the review only includes peer-reviewed journal articles, the need for further quality assessments of the retrieved articles was eliminated.



**Figure 1.** Systematic review as per PRISMA guidelines.

### 3. Results

The initial search process resulted in a total of 1039 articles from Google Scholar, 179 articles from Elsevier, 242 articles from Science Direct, 301 articles from Wiley Online Library, 67 articles from Taylor Francis, and 477 articles from Springer Link. As a result, a total of 1538 was obtained during the initial search process. **Table 2** provides the results from each electronic database explored.

**Table 2.** Electronic research database results.

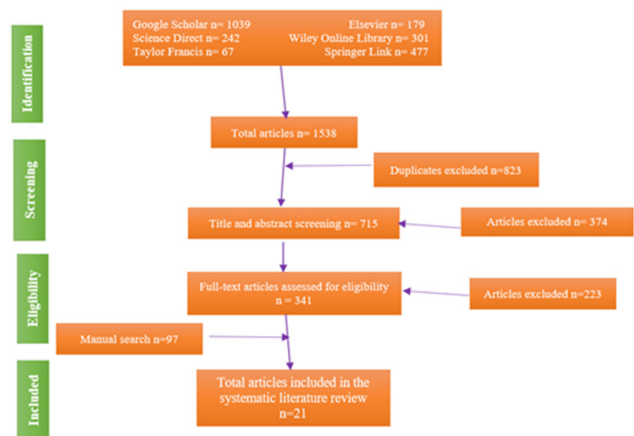
Electronic research database	Results
Taylor Francis	67
Wiley Online Library	301
Elsevier	179
Springer Link	477
Google Scholar	1039
Science Direct	242
<b>Total</b>	<b>1538</b>

**Figure 2** summarizes the PRISMA flow of the current systematic literature review process that resulted in 21 peer reviewed journal articles authored recently on the research topic.

#### *Conceptual framework to determine the outcomes*

The examination of 21 scholarly articles revealed a significant gap in the literature regarding the exploration of wellness and vaccine hesitancy, particu-

larly concerning the Omicron variant. This oversight limits the understanding of the relationship between vaccine hesitancy and overall wellness. The methodologies and statistical analyses employed across these studies were deemed adequate for outcome determination. Consequently, these articles were methodically organized to highlight the existing research void, underscoring the necessity for further investigation. Our research specifically focuses on analyzing the influence of wellness on vaccine hesitancy for the Omicron variant, drawing upon the insights gathered from these previously reviewed studies shown in **Table 3**.



**Figure 2.** PRISMA flow of the current systematic literature review.

**Table 3.** Summary of results.

Title	Author and year	Aim	Nature and characteristics	Key outcomes	Study type
“Global emerging Omicron variant of SARS-CoV-2: Impacts, challenges and strategies”	Dhama et al. (2022)	To provide a comprehensive review of the emerging SARS-CoV-2 variants, focusing particularly on the Omicron variant, including its lineages and hybrid variants.	Immunity and Resistance to Omicron uptake	The Omicron variant has reduced the effectiveness of existing vaccines and antibody treatments in guarding against the virus.	Systematic Review
“Modelling herd immunity requirements in Queensland: Impact of vaccination effectiveness, hesitancy and variants of SARS-CoV-2.”	Sanz-Leon et al. (2022)	To assess challenges in achieving effective herd immunity in populations with low natural immunity, exploring the impact of vaccine hesitancy and concerning variants.	Resistance to Omicron uptake Immunity	An 80% vaccine efficacy was sufficient to control Alpha variant outbreaks but fell short against Delta and Omicron variants.	Survey
“Understanding the Omicron variant (B. 1.1. 529) of SARS-CoV-2: Mutational impacts, concerns, and the possible solutions”	Islam et al. (2022)	To investigate the characteristics of the Omicron variant to understand its implications and the global efforts to counter the severe outcomes of the COVID-19 pandemic.	Resistance to Omicron uptake Immunity	Omicron’s emergence highlights the vital need for global vaccination access to prevent rapid viral mutations, potentially increasing transmission, virulence, or triggering new global crises.	Systematic review
“The effect of health literacy on COVID-19 vaccine hesitancy among community population in China: The moderating role of stress.”	Zhang et al. (2022)	To examine how personal factors like health literacy and stress perceptions influence individuals’ reluctance to receive the COVID-19 vaccine, offering strategies for enhancing vaccine promotion.	Resistance to Omicron uptake, immunity, and stress	Approximately 39.8% of participants displayed vaccine hesitancy, more prevalent among younger individuals and women. Those with high health literacy showed less hesitancy, notably in low-to-moderate stress demographics.	Online survey

Table 3 continued

Title	Author and year	Aim	Nature and characteristics	Key outcomes	Study type
“Addressing vaccine hesitancy and resistance for COVID-19 vaccines”	Peters (2022)	To study vaccine reluctance and opposition among intended recipients.	Resistance to Omicron uptake Low income settings	Combating vaccine hesitancy requires a comprehensive approach, emphasizing clear communication, trust, and cooperation among healthcare professionals, public entities, labor organizations, and policymakers.	Systematic literature review
“Vaccine Confidence and Uptake of the Omicron Bivalent Booster in Tennessee: Implications for Vulnerable Populations”	Alcendor (2023)	To investigate the adoption rates of Omicron bivalent boosters (OBB) in Middle Tennessee, encompassing diverse urban and rural areas.	Resistance to Omicron uptake Immunity	In Middle Tennessee, vaccination rates were observed to be below 4% in 18 counties, below 6% in 14 counties, and above 6% in only 5 counties.	Systematic literature review
“Effect of Conspiracy Beliefs on COVID-19 Vaccine Hesitancy: Moderating Role of Existential Anxiety and Spiritual Wellbeing in Adults”	Noor et al. (2023)	To explore the influence of coronavirus conspiracy beliefs on adult vaccine hesitancy, considering the moderating effects of existential anxiety and spiritual wellness.	Anxiety and spiritual wellbeing	Vaccine hesitancy correlates positively with Coronavirus conspiracy theories and existential anxiety but negatively with spiritual wellbeing.	Survey
“The past is so present: Understanding COVID-19 vaccine hesitancy among African American adults using qualitative data.”	Majee et al. (2023)	To assess vaccine attitudes and intentions within an African American faith-based wellness program, evaluating its impact on COVID-19 awareness and vaccine acceptance, and identifying potential solutions to this persistent public health issue.	Structural and social determinants of health,	Despite efforts by Live Well by Faith, vaccine hesitancy remains high due to historical distrust in government and pharmaceutical ethics among Black communities.	Interviews
“SARS-CoV-2 and its variants of concern including Omicron: A never ending pandemic”	Mohapatra et al. (2022)	To analyze concerns over vaccine safety, hesitancy, and related adverse effects.	Trust, willingness	The rapid development of COVID-19 vaccines, without specific antiviral drugs, leaves their efficacy open to debate.	Systematic literature review
“Vaccination Intention Following Receipt of Vaccine Information Through Interactive Simulation vs Text Among COVID-19 Vaccine-Hesitant Adults During the Omicron Wave in Germany”	Wegwarth et al. (2023)	To explore whether interactive simulations can effectively address COVID-19 vaccination hesitancy.	Willingness, trust	Interactive risk communication is crucial in reducing vaccine hesitancy and building public trust.	Cross-sectional study

Table 3 continued

Title	Author and year	Aim	Nature and characteristics	Key outcomes	Study type
“Impact of vaccination on the COVID-19 pandemic in U.S. states”	Chen et al. (2022)	To evaluate the initial success of the COVID-19 vaccination campaign and its progress towards achieving herd immunity in the U.S.	Mistrust, immunity	Accelerating vaccination rates and reducing hesitancy can expedite the achievement of herd immunity.	Empirical research
“In-Person Schooling Amidst Children’s COVID-19 Vaccination: Exploring Parental Perceptions Just after Omicron Variant Announcement”	Aljamaan et al. (2022)	To examine parental concerns about the Omicron variant, their willingness to vaccinate children, and their awareness of school-based COVID-19 preventative measures.	Willingness, trust, immunity	Parents expressed less concern over the Omicron than the Delta variant, showing greater willingness to vaccinate older children.	Cross sectional survey
“Low COVID-19 vaccine coverage and guardian acceptance among pediatric transplant recipients”	Zheng et al. (2023)	To investigate vaccine coverage in immunocompromised children, exploring guardians’ vaccination intentions and identifying hesitancy factors.	Depression, stress, trust	Main hesitancy reasons include fear of adverse effects and doubts about vaccine effectiveness.	Web-based survey
“SARS-CoV-2 variants and the global pandemic challenged by vaccine uptake during the emergence of the Delta variant: A national survey seeking vaccine hesitancy causes”	AlJamaan et al. (2022)	To evaluate COVID-19 vaccine acceptance and reluctance among Saudi Arabian residents during the rise of the Delta variant.	Willingness, trust, immunity	Vaccine hesitancy was more reported among women, particularly regarding vaccinating teenagers.	Cross-sectional survey
“Parents’ willingness to vaccinate themselves and their children with the booster vaccine against SARS-CoV-2: A cross-sectional study in Puyang city, China”	Zhou et al. (2023)	To explore parents’ hesitancy and willingness to receive booster doses for themselves and their children, identifying contributing factors.	Willingness, trust	Hesitancy and unwillingness were more common among the younger, less educated, less healthy, and those doubting vaccine efficacy and safety.	A cross-sectional study
“Parental perceptions and the 5C psychological antecedents of COVID-19 vaccination during the first month of Omicron variant surge: A large-scale cross-sectional survey in Saudi Arabia”	Alenezi et al. (2022)	To examine parents’ views on COVID-19 vaccines and the psychological drivers of vaccination during the initial phase of the Omicron variant’s spread.	Confidence, trust, willingness	Confidence in vaccines and collective responsibility significantly influence parents’ decision to vaccinate their children.	A cross-sectional online survey

Table 3 continued

Title	Author and year	Aim	Nature and characteristics	Key outcomes	Study type
“An Analysis of the Willingness to the COVID-19 Vaccine Booster Shots among Urban Employees: Evidence from a Megacity H in Eastern China”	Hu et al. (2022)	To identify determinants of vaccine booster acceptance among megacity workers and their main motivations.	Work type, confidence, willingness	Employee organization, vaccine knowledge, and social networks impact intentions to receive COVID-19 booster shots.	Online survey
“COVID-19 vaccine hesitancy and influential factors among Thai parents and guardians to vaccinate their children”	Kitro et al. (2022)	To analyze parental vaccine hesitancy and its influencing factors among Thai parents and guardians.	Self-desire, willingness	A significant portion of Thai parents are hesitant to vaccinate their children under 12 against COVID-19.	A cross-sectional survey
“COVID-19 vaccine hesitancy: Considerations for reluctance and improving vaccine uptake”	Parimi et al. (2022)	To summarize instances of vaccine hesitancy before COVID-19 and provide an update on hesitancy related to COVID-19 vaccines.	Trust	Vaccine development mistrust and misinformation have heightened public vaccine hesitancy.	Systematic literature review
“Predictors of Willingness of the General Public to Receive a Second COVID-19 Booster Dose or a New COVID-19 Vaccine: A Cross-Sectional Study in Greece”	Galanis et al. (2022)	To investigate the willingness to accept a second COVID-19 booster or a new vaccine and its influencing factors.	Trust, willingness	Public hesitancy and reluctance towards additional COVID-19 vaccinations are influenced by COVID-19 fear and vaccination trust.	A cross-sectional survey
“Parental hesitancy towards vaccinating their children with a booster dose against COVID-19: Real-world evidence from Taizhou, China.”	Huang et al. (2022)	To study the reluctance of Chinese parents to vaccinate their children with a COVID-19 vaccine booster.	Willingness, trust	Parents may doubt the efficacy or benefits of vaccine boosters.	A cross-sectional survey

## 4. Discussion

The impact of the Omicron variant on vaccine effectiveness has been a significant concern in the global fight against COVID-19. It has been observed that the Omicron variant has led to a reduced effectiveness of current vaccines and antibody-based therapies in providing protection against the virus [1-5]. This finding emphasizes the urgent need for universal access to vaccination. The failure to vaccinate individuals not only puts them at risk of severe illness

and mortality but also allows the virus to undergo genetic changes rapidly, potentially leading to increased transmissibility, higher pathogenicity, and the emergence of new waves of infections worldwide [6].

Vaccine hesitancy presents a significant barrier to achieving comprehensive vaccination coverage. The research found that 39.8% of their study participants were hesitant towards vaccines, with this skepticism more prevalent among younger individuals and women [7]. Contrastingly, a higher degree of health literacy was associated with reduced vaccine hesitancy, par-



ticularly in those experiencing low to moderate stress levels [7-9]. These findings indicate that strategies to combat vaccine hesitancy should be customized, taking into account demographic characteristics and psychological well-being. The formulation and implementation of such strategies demand a collaborative effort that ensures transparent and consistent communication, fosters trust, and involves a broad spectrum of stakeholders, including healthcare professionals, government entities, labor representatives, and policy makers [10,11]. It underscores the importance of seamless interaction among these parties to devise and apply measures that encourage vaccine uptake and address obstacles to vaccination [12]. Through pooling their expertise and resources, these entities can effectively promote vaccine acceptance and overcome the challenges posed by vaccine hesitancy.

This analysis elucidates the uneven distribution of vaccination rates across various regions, spotlighting, for instance, the scenario in Middle Tennessee. Here, disparities are stark: 18 counties reported vaccination rates under 4%, 14 counties fell below the 6% mark, and a mere 5 counties exceeded a 6% vaccination rate [13]. Such geographical variations underscore the urgency of tailoring public health strategies to local needs to foster herd immunity and shield at-risk groups.

The literature attributes vaccine hesitancy to a complex interplay of factors, including apprehensions about possible side effects, skepticism regarding vaccine effectiveness, historical distrust, and misinformation [14-16]. To counteract these barriers, it's imperative to launch targeted educational initiatives. These should aim to disseminate reliable information about the safety and efficacy of vaccines and rebuild trust in healthcare systems through community engagement and open communication [17,18].

Particularly noteworthy is the influence of parental attitudes on the vaccination of children. Factors such as the child's age and the parents' perception of risk significantly affect their decision-making [19-21]. The analysis indicates that parents exhibit less concern about the Omicron variant compared to the

Delta variant, yet they are more inclined to vaccinate older children than younger ones. Insights into these nuances can guide the development of interventions tailored to alleviate parental anxieties and enhance vaccination uptake among the younger population.

Moreover, the research underlines the pivotal role of vaccine confidence and a collective sense of responsibility in influencing parents' decisions to vaccinate their children. Various factors, including vaccine awareness, organizational structures, social circles, COVID-19 fears, and trust in the vaccination process, play a significant role in shaping attitudes towards vaccine acceptance and booster uptake [22-24]. These insights advocate for a holistic approach to promoting vaccine acceptance, one that extends beyond individual beliefs to include societal and organizational influences.

#### **4.1 Strengths**

**Comprehensive overview:** The discussion provides a comprehensive overview of the impact of the Omicron variant on vaccine effectiveness and the factors influencing vaccine hesitancy. It synthesizes various findings from the literature, covering topics such as vaccine efficacy, demographic factors, health literacy, trust-building measures, and the role of stakeholders in addressing vaccine hesitancy.

**Practical implications:** The discussion offers practical implications for addressing vaccine hesitancy, such as the importance of clear and consistent messaging, collaboration between stakeholders, tailored interventions, and addressing disparities in vaccination rates. These insights can guide policymakers, healthcare professionals, and public health authorities in designing effective strategies to improve vaccine acceptance and coverage.

#### **4.2 Limitations**

**Limited focus on specific populations:** The discussion does not extensively explore the nuances of vaccine hesitancy within specific populations, such as ethnic or racial groups, socioeconomic status, or

individuals with specific health conditions. A more detailed analysis of these specific populations could provide deeper insights into their unique challenges and inform targeted interventions.

## 5. Conclusions

The systematic literature review highlights the multifaceted nature of vaccine hesitancy and the importance of addressing this challenge to combat the spread of COVID-19, particularly in the context of the Omicron variant. Clear and consistent messaging, trust-building measures, collaboration among stakeholders, and targeted interventions that consider demographic and psychosocial factors are essential in addressing vaccine hesitancy. By addressing these factors and promoting universal access to vaccination, we can work towards achieving herd immunity and mitigating the impact of the Omicron variant and future variants.

## Author Contributions

### 1. Satvika Marrapu (Lead Author):

- Conducted the systematic literature review on vaccine hesitancy related to the Omicron variant.
- Analyzed and synthesized research findings on factors influencing vaccine hesitancy, including demographic characteristics, health literacy, historical mistrust, and misinformation.
- Investigated the role of clear and consistent messaging, trust-building measures, and collaboration among stakeholders in addressing vaccine hesitancy.
- Drafted the manuscript, including the introduction, methodology, and discussion sections.
- Contributed to the interpretation of findings and implications for policymakers, healthcare professionals, and public health authorities.

### 2. Dr. William Senn

- Conducted extensive literature searches to identify relevant studies and articles related to vaccine hesitancy and the Omicron variant.
- Assisted in data extraction and analysis, particularly regarding demographic characteristics and

trends in vaccine hesitancy.

- Provided critical feedback on the manuscript drafts, including revisions for clarity, coherence, and accuracy.

- Contributed to the discussion section by offering insights into the implications of parental attitudes towards vaccinating children and the impact of confidence and collective responsibility.

### 3. Dr. Victor Prybutok

- Contributed expertise in public health and vaccination strategies, providing insights into effective approaches for addressing vaccine hesitancy.

- Reviewed and synthesized research findings on the effectiveness of existing vaccines and antibody-based therapies in combating COVID-19, particularly considering the emergence of the Omicron variant.

- Offered guidance on trust-building measures and collaboration among stakeholders to enhance vaccination rates.

- Provided critical feedback on the manuscript drafts, ensuring alignment with current research and best practices in public health policy and practice.

## Conflict of Interest

None of the authors have financial interests, affiliations, or personal relationships that could influence the objectivity or integrity of the research presented in this paper. The views expressed in this paper are solely those of the authors and do not represent any organization or entity. We have adhered to ethical standards in conducting and reporting this research.

## Data Availability Statement

As this paper is based on a structured literature review, all data utilized in the analysis are presented within the paper itself. We have provided comprehensive information on the selected papers, including key findings, in table format within the manuscript. No external datasets or additional resources were used in this research. Therefore, all data necessary for reproducing the findings and conclusions presented in this paper are readily available within the

manuscript.

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## Ethics Statement

This research adheres to ethical standards in conducting and reporting the structured literature review titled 'Impact of Wellness on Hesitancy on the Omicron Vaccination'. All information and data included in the paper have been collected and analyzed with integrity and transparency. The research process followed ethical guidelines, including proper citation and acknowledgment of sources, respect for intellectual property rights, and confidentiality of any sensitive information. The authors have complied with relevant ethical regulations and guidelines outlined by their respective institutions. Additionally, any potential conflicts of interest have been disclosed. This study aims to contribute to the scholarly discourse on vaccine hesitancy and public health policy in an ethical and responsible manner.

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