

## COVID-19 Vaccine Hesitancy: Causes and Consequences

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**Received:** June 28, 2021; **Published:** July 28, 2021

### Abstract

The low acceptance of COVID-19 vaccines is a main threat to the effect of vaccination in preventing illness and death from COVID-19. The aim of this paper is to review a number of studies that were conducted to assess vaccines hesitancy, the causes of COVID-19 vaccines hesitancy. The electronic searching was conducted using two databases, PubMed and Google Scholar. There are differences among countries regarding vaccines hesitancy. Vaccines hesitancy was found to be associated with many factors. It is recommended using a comprehensive multi-component methods design to the local people, joined with good communication at the level of the individual.

**Keywords:** COVID-19; Vaccine; Hesitancy

### Introduction

According to the World Health Organization (WHO), the vaccine hesitancy can be seen as a “delay in acceptance or refusal of safe vaccines despite availability of vaccine services” [1]. In 2019, the WHO recorded vaccine hesitancy as one of the top ten universal threats to health [2].

The COVID-19 vaccination started, with over 700 million doses being given international as of April 2021 [3]. The COVID-19 vaccines are extremely effective at reducing severe illness and death from COVID-19. They are safe, with low risks of severe adverse reactions [4]. On the other hand, lack of self-confidence in vaccines for COVID-19 poses threats to health and can disrupt world efforts to terminate the present pandemic [5]. A rejection rate of more than 10% is assessed to be adequate to weaken the population benefits of COVID-19 vaccines [6].

Vaccine hesitancy is initiated by multifaceted, context-specific elements that differ through place, time, and different vaccines. It is influenced by concerns of satisfaction, accessibility, confidence, and socio-demographic circumstances [7]. It may also be associated with misinformation and conspiracy theories which are frequently spread online, including through social media [8]. Furthermore, structural factors, for instance, health disparities, socioeconomic disadvantages, systemic discrimination and barriers to access are important drivers of low confidence in vaccines and poor acceptance [8].

Consequently, the low uptake of COVID-19 vaccines is a main threat to the effect of vaccination in preventing illness and death from COVID-19 [9-11]. In this review paper, we offer an overview of vaccine hesitancy, the causes of COVID-19 vaccines hesitancy and some methods that health care providers and health policy decision makers can implement at the individual and community levels to support individuals make learned decisions regarding COVID-19 vaccines.

### Aim of the Study

The aim of this paper is to review a number of studies that were conducted to assess vaccines hesitancy, the causes of COVID-19 vaccines hesitancy.

### Method

The electronic searching was conducted using two databases, PubMed and Google Scholar. The key words were “COVID-19”, “Vaccine”, and “Hesitancy”. The inclusion criteria were 1) all papers published in the English language, 2) discussing the sides of the COVID-19 vaccine, 3) published within 2010-2020.

### Search results

Examining of the literature produced 200 studies for review. The last evaluation resulted in 53 studies, not including studies comprising irrelevant studies and abstract only.

### Results and Discussion

#### Vaccine hesitancy

Vaccines hesitancy is a universal issue. A study in 2021 indicated that among 50% and 60% of all participants worldwide were ready to take the COVID-19 vaccine, with differences through countries [12].

Vaccines hesitancy among health care staffs is an area of concern as of health care staffs' roles as a reliable source of health data, and they have more personal exposure to infections in health care settings. A recent multicenter study found that among 2,761 health care workers, about (80.9%) accepted to take the COVID-19 vaccines. Health care managers, medical doctors, and environmental services workers were more likely to agree to take COVID-19 vaccines compared to nurses [13]. A recent study addressing readiness to take future COVID-19 vaccines among medical doctors and nurses in Belgium, France and Quebec discovered that 48.6% of health care workers stated high acceptance, while 23% stated moderate acceptance, and 28.4% stated hesitancy or unwillingness [14]. In the United State, most Americans were enthusiastic to take the COVID-19 vaccines for themselves (75%) and their families (73%) [15].

#### The causes of COVID-19 vaccines hesitancy

Vaccines hesitancy is an obstacle to the campaigns that aim to control COVID-19. It was found to be associated with many factors. Higher vaccines hesitancy is described among women (women 21%, against men 15%), younger age groups (28% in 25 - 34 years, against 14% in 55 - 64 years), and in people with a low education level (24% in secondary school level, against 13% in university level) [16].

According to a recent British study, COVID-19 vaccines hesitancy were associated with female gender, youth, low education, low income, high informational dependence on social media, low informational dependence on print and broadcast media, membership of other than white ethnic groups, low perceived risk from COVID-19 and low trust in researchers and physicians [17]. A cross-sectional study was conducted to recognize the causes underlying vaccines hesitancy through 17 health care organizations. The data reflected that males, age above 50, rehabilitation center workers, and occupational COVID-19 exposure were associated with acceptance of vaccines. While factors for refusal comprised vaccine novelty, wanting others to take it first, and inadequate time for decision-making [13].

An online study carried out to search for vaccination intention among the people of the Kingdom of Saudi Arabia. The researchers found that the perceived barriers construct side effects of the vaccine [OR = 0.31], safety [OR = 0.062] and cues to action construct [OR = 0.32] were the important factors delaying the acceptance of COVID-19 vaccines [18]. In the United States, black Americans were less ready than White Americans (47% vs. 79%), Hispanic Americans were more ready than White Americans (80% vs. 75%). In Americans, females were less likely than males (72% vs. 79%). Those without insurance were less ready than the insured (47% vs. 78%). Readiness to COVID-19 vaccines was higher for that age 65 and more than for younger age groups [15].

### How to approach COVID-19 vaccines hesitancy

There is not only one intervention able to address the COVID-19 vaccines hesitancy [19]. When looking for the most effective approaches to raise acceptance of vaccines, it is recommended using a comprehensive multi-component methods design to the local people, joined with good communication at the level of the individual [19-35]. Identifying barriers to accept COVID-19 vaccines (Box 1) supports to advise the suitable interventions to address them. The important key is to build confidence, mainly pay attention to people's concerns, respect the diverse cultural or religious beliefs, and be aware of traditionally fixed understandable distrust, besides other ethical concerns of medical interventions [36].

- Low assurance in vaccines, including their significance, safety, and usefulness.
- Healthcare inequalities and socioeconomic.
- Community difficulties (poor access to precise data and lower levels of education).
- Rumors and misinformation, specifically through social media.
- Barriers to access (time of vaccines delivery, location and cost associated with socioeconomic disparities and marginalization).

**Box 1:** *The causes of COVID-19 vaccines hesitancy [13,15-18].*

Health care providers are a reliable source of data on vaccination and may impact local rates of vaccination in people and at the population level. Health care providers working together with local authority members, trust leaders and community supporters may assist with engagement, guide family decisions, and make recommendations for vaccines [36]. The best guidelines for health care providers to communicate with vaccine-hesitant people are provided in box 2 [37].

- Be alert of emotional and cultural differences.
- Be aware of the distinctive contexts, such as problems in accessing health care and adhering to community health guidance.
- Offer up-to-date and clear guidance.
- Frequently check understanding.
- Change styles for different literacy, education, and language levels.
- Have dependable, up-to-date, and accessible sources of data on hand.
- Avoid using stigmatizing language and jargon.
- Support justice by recognizing and aiming vulnerable groups.

**Box 2:** *The best guidelines for health care providers to communicate with vaccine-hesitant people [37].*

One of the most important roles of nursing regarding the refusal of the COVID-19 vaccines is providing appropriate health education and the correction of knowledge about the COVID-19 vaccines. Clarification of the incorrect information through conducting seminars, lectures, meetings, and any proper media to reach out to as many people as the nurses can [38-64].

## Conclusion

The low acceptance of COVID-19 vaccines is a main threat to the effect of vaccination in preventing illness and death from COVID-19. There are differences among countries regarding vaccines hesitancy. Vaccines hesitancy was found to be associated with many factors. It is recommended using a comprehensive multi-component methods design to the local people, joined with good communication at the level of the individual.

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**Volume 10 Issue 8 August 2021**

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