Penerimaan Vaksinasi Covid-19 Pada Ibu Hamil Tahun 2022 di Kota Depok

Acceptance of Covid-19 Vaccination for Pregnant Women in 2022 in Depok City

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ABSTRAK

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) adalah penyebab jenis penyakit menular Coronavirus Disease 2019 (COVID-19). Sampai Juni 2022, dari 208.265.720 total target vaksinasi, 95,16% telah menerima vaksin dosis 1; 78,15% menerima dosis 2, dan 14,86% menerima dosis 3 atau booster. Tujuan penelitian ini adalah untuk mengkaji lebih dalam penerimaan ibu hamil di Kota Depok dalam menerima vaksinasi COVID-19. Metode penelitian ini dilaksanakan dengan menggunakan metode penelitian kualitatif lapangan dengan pendekatan deskriptif-analitis. Hasil penelitian ini berdasarkan wawancara mendalam yang dilakukan tim peneliti dengan 7 informan, ditemukan salah satu informan yang berpendapat bahwa ibu hamil tidak wajib mendapatkan vaksin COVID-19 karena menimbulkan efek samping bagi sebagian orang. Empat di antaranya menyebutkan bahwa vaksin COVID-19 wajib untuk melindungi ibu dan janin dari virus COVID-19. Dua diantaranya menyatakan kewajiban vaksinasi COVID-19 bagi ibu hamil bergantung pada kondisi kesehatan ibu. Terdapat perbedaan persepsi penerimaan vaksin antar informan. Diterimanya vaksinasi COVID-19 informan dikarenakan kebutuhan: 1) administrasi; 2) kesadaran; 3) bekerja.

Kata Kunci: COVID-19, Penerimaan Vaksin, Ibu Hamil

ABSTRACT

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) is the cause of the infectious disease known as Coronavirus Disease 2019 (COVID-19). As Juny 2022, out of 208,265,720 total vaccination targets, 95.16% have received vaccine dose 1; 78.15% received dose 2, and 14.86% received a dose of 3 or a booster. The purpose of this study was to examine more deeply the acceptance of pregnant women in Depok City on acceptance COVID-19 vaccinations. This research method is carried out using a field qualitative research method with a descriptive-analytical approach. The results of this research are based on in-depth interviews guided by the research team with 7 informants, it was found that one informant believes that pregnant women are not required to get the COVID-19 vaccine because it causes side effects on some people. Four of them mentioned that the COVID-19 vaccine is mandatory to protect the mother and the fetus from the COVID-19 virus. Two of them stated that the obligation to vaccinate for pregnant women depends on the health condition of mother. There are differences in perception of vaccine acceptance between the informants. The acceptance of COVID-19 vaccination of the informant is due to the need: 1) administration; 2) awareness; 3) work.

Keywords: *COVID-19, Vaccine Acceptance, Pregnant Women*

INTRODUCTION

At the end of 2019, a new type of acute respiratory disease caused by the coronavirus emerged. The WHO China office announced a case of pneumonia of unrecognized etiology in Wuhan City, Hubei Province, China, starting on December 31, 2019. Until March 11, 2020, WHO declared COVID-19 as a pandemic because it has infected many countries around the world (Kemenkes, 2020). Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) is the virus that causes Coronavirus Disease 2019 (COVID-19). A brand-new type of coronavirus that has been unidentified in humans is SARS-CoV-2 (Handayani, Hadi, Isbaniah, Burhan, & Agustin, 2020). Indonesia is one of the countries that endured the impact of the pandemic, also has the highest prevalence of cases and death rates in Southeast Asia. Hope remains to find a vaccine against the virus that causes SARS-CoV-2, which has so far shown success in preventing the transmission and incidence of COVID-19 cases (Ophinni et al., 2020). The government has made various efforts to overcome the impact of the COVID-19 pandemic, one of them is vaccination. To control the spread of COVID-19 in Indonesia, in the context of assertiving the 2019 Coronavirus Disease (COVID-19) pandemic, the government has delivered Presidential Regulation Number 99 of 2020 regarding Vaccine Procurement and Vaccination Implementation. However, there are also pros and cons related to receiving vaccines in a society where there are people who refuse to be vaccinated (Gandryani & Hadi, 2021).

The vaccination program started in January 2021, with health workers as the priority group for the initial batch of vaccines. Along with the increasing supply of vaccines, the general public is encouraged to vaccinate (Direktorat Jenderal Pencegahan dan Pengendalian Penyakit, 2021). The data of people who have been vaccinated will be entered into the PeduliLindungi application, the data is a requirement to travel by public transportation or enter various public places. As of today, out of 208,265,720 total vaccination targets, 95.16% have received vaccine dose 1; 78.15% received dose 2; and 14.86% received a dose of 3 or a booster (Kementerian Kesehatan RI, 2022). In comparison to non-pregnant individuals, pregnant women are at bigger risk to experience COVID-19 complications, such as hospitalization, ICU admission, and death (Centers for Disease Control and Prevention, 2019; Allotey J et al, 2019). Pregnancy vaccination is routinely suggested to prevent other infectious disease-related morbidity and mortality in pregnant women and newborns. (Omer SB, 2017). This study aims to examine more deeply the perceptions of pregnant women in Depok City on receiving COVID-19 vaccinations.

SUBJECT AND METHODE

The data collection method is an in-depth interview with informant to examine more deeply the perception of pregnant women in Depok City on acceptance COVID-19 vaccinations. The research instrument was first tested on 2 informants who met the inclusion criteria and were following the characteristics of the actual informants, but were not domiciled in Depok City. Pregnant women who are healthy or sick and have been vaccinated against Covid 19 can become informants in this study.

Based on the results of the instrument trial, it was found that the research instrument could be understood by the informants, in the instrument there were dichotomy questions (yes/no answers), but each answer choice would be asked to state the reasons. The interview lasted for approximately 30 minutes. Based on the test results, it can be considered that the instrument is quite relevant to answering the research concept framework

Data collection is completed through the Zoom Meeting application and manual transcription process with Microsoft Word. The criteria for the informants are willing to be interviewed, have no communication problems, have been vaccinated against COVID-19 during pregnancy or will be vaccinated during pregnancy whether initially willing or not, have a smartphone and internet access, and has the PeduliLindungi.

Data collection was carried out on 7 informants in May with a duration of 30-45 minutes per informant. Before the interview, the research team explained what would be done, and the rights and obligations of the informant, and asked for informed consent. Researchers took notes and recorded during interviews through the recording of the Zoom Meeting. The stages of data analysis in this study use the theory of Miles and Huberman as proposed by Gunawan (2013). The process of

data analysis is carried out through three stages, namely data reduction, data display, and conclusion/verification. In this study, the ethical review was not carried out due to time limitations, but the study used informed consent and fulfilled all the requirements of human research according to the Declaration of Helsinki.

RESULT

In this study, informants have provided enough information and have reached data saturation, therefore that 7 people are sufficient. There were 7 female informants in this study. The educational background of the informants is different, the higher is the master degree and the lowest is the vocational high school. The job characteristics are 3 housewives, 2 teaching staff, and 2 private company employees.

Table 1. Informant Frequency Distribution

Informant	Age	Educational Background	Occupation
1	31 years old	Bachelor	Housewife
2	27 years old	Bachelor	Employees
3	29 years old	Vocational high school	Housewife
4	28 years old	Diploma	Housewife
5	35 years old	Bachelor	Teacher
6	39 years old	Bachelor	Islamic religion teacher
7	27 years old	Master	Private company employees

Perception of Vulnerability

From the interviews, most of the informants' perceptions in defining the COVID-19 virus were following the theoretical definition, namely a dangerous virus. Informant 1 even mentioned the history of the virus originating from China, its symptoms, and its effects. Then, it is supported by informant 2, namely a virus that attacks the respiratory tract, and can be transmitted to other people if there is direct contact or is exposed to 3 points on the face, namely the eyelids, nose, and mouth. According to informant 4, the COVID-19 virus is dangerous, spreads quickly, and causes shortness of breath. According to informant 5, the effects of the COVID-19 virus on the patient's condition include shortness of breath, loss of smell, and high fever after being injected with the vaccine. According to informant 6, the COVID-19 virus is a virus that is easily infected by anyone, anytime, anywhere. According to informant 7, the COVID-19 virus is symptomatic in sufferers or has more effects on patients who have congenital diseases such as comorbidities.

Most of the informants know what the COVID-19 vaccine is and know the types of vaccines. The type of vaccine mentioned by the informants was Sinovac (6 out of 7 informants). Regarding vaccines that are safe for pregnant women, several informants knew from health workers, for example, doctors they consulted during pregnancy and midwives. However, some informants mentioned that certain vaccines are not safe for pregnant women, such as according to informant 7 that the AstraZeneca vaccine alone is not safe for pregnant women. Then, 5 out of 7 informants said that they were at risk of contracting COVID-19 even though they had received the vaccine. Informant 1 stated that she is at risk because of her low immunity. This is supported by informant 4 who stated that it must be risky, so it must be maintained, one way is with vaccines. Informant 6 considers herself to be at risk of getting COVID-19 because she has a history of lung spots. There is also a fear of getting COVID-19 and transmitting it to her father who lives in the same house and has a history of comorbid illness (only has one kidney). To reduce this risk, the informants' answers lead to socialization carried out by the government, such as wearing masks, enduring distance, washing hands, staying at home, wearing double masks, and others. Out of 7 informants, 2 people have been exposed to COVID-19. Then, 3 of 7 informants had been unwell because of COVID-19, namely the second, fourth, and seventh informants. The second informant had been unwell due to

COVID-19 twice, the second was infected during the early trimester of pregnancy, with symptoms of fever, back pain, and cough. The fourth informant only felt a loss of smell. Meanwhile, the seventh informant felt symptoms of fever and could not wake up for up to 5 days.

Perception of severity

From the interviews, 6 out of 7 informants believed that the COVID-19 virus was dangerous, and 6 out of 7 informants knew the effects of COVID-19. According to the informant, the 2 effects of COVID-19 can die, especially if accompanied by comorbid diseases (heart, high blood pressure) and high mortality rates in people who have a history of comorbidities and are exposed to COVID-19. However, there is 1 informant who does not admit that the COVID-19 virus is as fatal as stated because in accordance with her there are several of her friends who have been exposed to the COVID-19 virus and are still healthy. Then, 6 out of 7 informants said that the COVID-19 virus had a very high transmission rate. Informant 2 stated that in her office she was almost certainly exposed to COVID-19. If there is one person in the affected room, it can be immediately dismissed from one floor. However, there is a perception that one informant stated that the COVID-19 virus does not have a very high transmission rate according to what has been received or heard from a friend who has been exposed to the virus, when her friend contracted COVID-19 she was still in contact with or in contact with her husband, and her husband is not infected. All informants believe the COVID-19 vaccine able reduce the severity of COVID-19 illness. From various experiences, informants shared their experiences with their family and friends.

Perception of obstacles

Based on interviews, all informants have been vaccinated and have valid certificates. 3 out of 7 informants had difficulty getting the vaccine. According informant 2 who stated that he had difficulties because the first type of vaccine and the second vaccine received the AstraZeneca vaccine, then the doctor she consulted did not recommend the AstraZeneca vaccine for pregnant women, her doctor stated that it was better for the Sinovac or Moderna vaccine, while at that time the vaccine services in his area were mostly in stock. AstraZeneca

vaccine. Then it was supported by informant 4 who stated that he queued to get the vaccine for up to 5 hours. No one forbids the informants from getting vaccinated, but some informants (2 out of 7 people) were worried by their parents and friends, such as informant 2 who stated that parents were afraid, and worried, especially when they were pregnant with their first child. Then, informant 4 stated that some of her friends suggested vaccines only when they gave birth. Then, 5 out of 7 informants stated that the one who invited them to get vaccinated against COVID-19 was a doctor or midwife whom they consulted for pregnancy.

Perception of benefits

According to the interviews, every informant was aware of the COVID-19 vaccine's benefits, four of whom were able to explain the benefits in detail. According to one informant, pregnant women are not required to receive the COVID-19 vaccine because it has the potential to cause adverse effects in some individuals, 4 of them believe that the COVID-19 vaccine is mandatory to protect the mother and fetus from the COVID-19 virus, and two of them stated that the obligation to vaccinate against COVID-19 for pregnant women depends on the health condition of each mother.

Cue to action

From the results of interviews, all informants know information about vaccines and COVID-19 disease from the internet, for example, social media and online news. Such as informant 1 stated that she knew vaccine information from social media, such as infographics on Instagram and online news portals. Then informant 4 stated that she often searches, reads articles, and sees Instagram and posters at the hospital about COVID-19. According to informant 7, she received information about vaccines and COVID-19 disease from the official group on Whatsapp and the Whatsapp status of her friends.

DISCUSSION
Vulnerability

Pregnant women are a group that is vulnerable to the spread of the COVID-19 virus because their immune system is easily decreased. Thus, they are very likely to get the COVID-19 virus. Five out of seven informants stated that pregnant women are a group at high risk of contracting the COVID-19 virus.

However, 2 informants stated that they were not at high risk of contracting COVID-19. For example, informant 3 stated that at first, she was afraid of the COVID-19 vaccine because later there would be side effects of getting sick. Therefore, the informant considered that pregnant women were not at high risk of contracting COVID-19 and the use of the COVID-19 vaccine was not necessary. In a review directed by Ernawati (2021) which portrays a survey of Coronavirus cases in view old enough, orientation, age gathering, and populace thickness in Pati Locale, pregnant women are not included as one of the vulnerable groups for COVID-19 virus and transmission. In the study, it was stated that men were more susceptible to being exposed to the COVID-19 virus than women due to occupational factors. In addition, women have an x chromosome and the progesterone hormone, which contributes to both intuitive and adaptive immunity.

This is not in line with other studies which stated that the risk of contracting the virus is approximately the same in all human groups. However, patients with comorbidities have a greater risk of contracting COVID-19. Additionally, pregnant patients with COVID-19 symptoms are more likely than nonpregnant patients to develop more severe diseases, particularly those with comorbid conditions like hypertension, diabetes, or cholestasis of pregnancy (Joubert *et al*. 2021; Heather 2021). This risk may be made worse by physiological, metabolic, and vascular changes in both normal and high-risk pregnancies. Additionally, the normal increase in the angiotensin-converting enzyme 2 (ACE2) receptor that occurs during pregnancy would cause an upregulation of the ACE2 receptor. This would make it possible for SARS-CoV-2 to bind to and enter host cells, which would raise the likelihood of infection during pregnancy. When SARS-CoV-2 binds to the ACE 2 receptor, it slows down the expression of the ACE 2 receptor, making it more likely that the vascular, endothelial cell, and microcirculation, as well as vasoconstriction, will malfunction. Intrauterine growth restriction, miscarriage, and premature birth are all possible outcomes of this. In severe COVID-19-related illnesses, the virus has also been shown to exacerbate hypercoagulable pregnancies, increasing the risk of DVT, pulmonary embolism, and stroke. Consequently, the increased susceptibility of

pregnant women to COVID-19 infection and symptoms has been linked to hospitalization, ICU admission, and mechanical ventilation requirements. In Jering *et al*.'s study, Rates of death, myocardial infarction, venous thromboembolism, pre-eclampsia, and preterm delivery were found to be higher in women with COVID-19 who gave birth compared to women without COVID-19 in inpatient outcomes. Women who gave birth to COVID-19 also used more intensive care, mechanical ventilation, and chest imaging.

To reduce the high risk of COVID-19 virus transmission, the informants explained that it is necessary to wear masks, apply health protocols, and maintain distance in crowds. Among all the informants who have been interviewed, 2 of them have experienced COVID-19 illness. Informant 2 explained the symptoms experienced, namely when pregnant, there were symptoms of fever, back pain, and cough for a long time, but were confused about whether these were symptoms during the first trimester or COVID-19 illness. Informant 7 stated that the symptoms of COVID-19 were body aches and fever for 38-39 degrees. Thus, she could not get up because of the fever. This is consistent with the research that Nurosyid (2021) conducted through a literature review. that in pregnant women the symptoms caused by the COVID-19 virus are general symptoms such as fever, cough, and myalgia, but no transmission has been found between mothers and babies born.

In this study, all informants explained that the COVID-19 virus has almost similar symptoms to flu, but are accompanied by shortness of breath or respiratory problems. Informants can also mention the types of vaccines used in Indonesia, including vaccines that are suitable for pregnant women depending on the condition of the mother. However, informant 7 stated that the AstraZeneca vaccine is not safe for pregnant women. This is described in the study of Gilbert *et al*, vaccines using viral vectors. The COVID-19 vaccines produced by J&J/Janssen and AstraZeneca both utilize an adeno-based viral vector to convey vital instructions to our cells. This kind of vaccine has been extensively tested without causing harm in humans or animals, and it is widely used. In large-scale Ebola vaccination trials, for instance, similar viral vector vaccines have been given to pregnant women in all three trimesters. There were no reported negative

pregnancy-related outcomes in this study. There are no formal studies on how this vaccine affects pregnant women. However, cerebral venous sinus thrombosis and splanchnic thrombosis are extremely uncommon side effects of the adenovectored vaccine. Therefore, a risk-benefit analysis based on the best data on the potential for thromboembolic adverse events and the level of exposure to COVID-19 based on the epidemiological situation should be carried out prior to making any further decisions regarding the use of this kind of vaccine during pregnancy.

There are currently no official study results available for vaccines based on messenger RNA, such as Moderna's COVID-19 vaccine and that manufactured by Pfizer-BioNTech. The mRNA vaccine cannot infect people with COVID-19 because it does not contain the live virus that causes the disease. Because mRNA does not enter the cell nucleus, mRNA vaccines do not interact with a person's DNA or alter their genetic make-up. An American company that makes COVID-19 vaccines said it would study pregnant women to make sure the vaccine is safe for both the mother and the child. Pfizer was the first company to conduct phase 2 and 3 studies on 4000 pregnant women to monitor potential effects on the unborn and ensure safety during the second and third trimesters of pregnancy. In the US, the V(accination)- Safe program permits members to enter their own data on the site deliberately. Members might get follow-up instant messages and calls from the CDC mentioning extra data at different times after inoculation. This data is aggregated and linked to data from the Vaccine Adverse Event Reporting System (VAERS), which enables patients, healthcare professionals, and others to submit standard reports of adverse events. The 55,220,364 reports have been received from individuals who have received at least one dose of the Pfizer-BioNTech or Moderna vaccine, including 30,494 pregnant women, of whom 16,039 had received the Pfizer-BioNTech vaccine and 14,455 women had received the Moderna vaccine in their most recent communication. The paces of aftereffects and difficulties in immunized ladies didn't seem, by all accounts, to be essentially not quite the same as those in unvaccinated pregnant ladies. The rates of miscarriage, preterm delivery, stillbirth, hypertension, diabetes, growth restriction, and perinatal mortality found in the additional

follow-ups of 1,815 pregnant women, 275 of whom had completed their pregnancies, were comparable to or lower than those that would have been expected from population-based estimates. The CDC recommends that pregnant women receive the Pfizer-BioNTech and Moderna COVID-19 vaccines because of these surveillance data. Pregnant women infected with COVID-19 have a 1.6% mortality rate, according to Villar *et al*. (2021) research. Pregnant women should get vaccinated to prevent severe COVID-19 infection and to instill immunity in the fetus by passing on active IgG (Albrecht & Arck, 2020).

Severity

Based on journals obtained from a literature search, several factors were found to be most frequently associated with the severity of COVID-19 infection, namely age, comorbid disease, vitamin D deficiency, and obesity in the patient (Lee pi *et al*, 2020). Age greatly affects the severity of disease and mortality in COVID-19 patients. The age that has a high level of severity occurs in elderly people, namely individuals aged 60 years and over. This is presumably because the competence of a person's immune system will decrease with age. This decrease in the competence of the immune system is caused by the degeneration of all components of the innate immune system and the adaptive immune system. This degeneration manifests in two forms, namely a decrease in cellular quantity (neutrophil cells, T lymphocyte cells, and dendritic cells), a decrease in the number of receptors involved in the immune response (TLR receptors and surface receptors on monocytes and macrophages), and a decrease in the ability to differentiate (lymphocytes and macrophages). On the other hand, individuals aged 15 years and under have a lower risk of contracting COVID-19 due to the absence of degeneration of immune system competence and even various studies show that the age of children to adolescents is the peak point of immune system competence.

The second factor that is no less important is the comorbidities of individuals infected with COVID-19, especially cardiovascular disease, hypertension, diabetes, and liver disorders which have also been shown to exacerbate COVID-19 infection (Susilo *et a.,* 2020; Liu Ha *et al*. 2020). A systematic review article published in 2020 that discusses the

correlation between chronic illnesses that accompany infected individuals and the severity of COVID-19 infection shows that people who have comorbidities, especially those with chronic diseases, are more susceptible to COVID-19 infection and are more likely to have COVID-19 infection. higher to cause severe clinical manifestations. This is because people who have chronic comorbidities will experience a decrease in their immune response, so they are more easily infected by COVID-19 and can experience a bad outcome. In addition, a person's comorbidities also increase the odds ratio of being admitted to the ICU which indicates that the clinical manifestations that arise as a consequence of COVID-19 infection are quite severe. All the factors previously mentioned are not independent but are interrelated with each other in determining the severity of COVID-19 infection.

The risk of hospitalization for the Omicron variant is lower than for the Delta variant. The Omicron variant can still cause severe symptoms and death, especially in vulnerable people such as the elderly, those having comorbidities, and people who have not been vaccinated. However, with a higher transmission rate, if it is not controlled, more people will become infected and require medical treatment (self-isolation/centralized/hospital) so that it can burden the health system.

The Health Research and Development Agency of the Indonesian Ministry of Health's evaluation of the COVID-19 vaccine's efficacy (Kemenkes RI, 2021), demonstrated that the vaccine was effective in reducing both the need for medical care and the number of deaths resulting from COVID-19-related complications. This study was led on 71,455 wellbeing laborers in DKI Jakarta including medical attendants, birthing assistants, specialists, experts, and other general staff during the period January-June 2021. The study looked at treatment, positive confirmed cases of COVID-19, and COVID-19-related deaths in three groups of health workers: those who had received the first vaccination, those who had received the second vaccination, and those who had not been vaccinated. Compared to health workers who had received a complete vaccination, the number of unvaccinated workers who died was relatively higher. In other words, only two out of every ten health

workers who have received the full dose of the COVID-19 vaccine have the opportunity to become infected with the virus between January and March. This means that the vaccine's effectiveness in preventing COVID-19 infection is 84%. This demonstrates that vaccination reduces the likelihood of contracting COVID-19. When compared to health workers who have not been vaccinated, those who have a significantly greater resistance to not becoming infected with COVID-19.

In this study, 6 out of 7 informants agreed that COVID-19 was a dangerous virus. They say the COVID-19 virus causes death and suffocation. Additionally, they asserted that the COVID-19 virus posed a greater threat to the elderly and individuals with concurrent illnesses. However, there is 1 informant who said that the COVID-19 virus is not dangerous because of the experience of friends from the work environment. This informant is also the only one who does not believe that COVID-19 has high infectiousness. She stated that her infectiousness was not so high because she had heard from a friend who had been infected with the virus, when her friend got the virus and had intercourse or contact with her husband, her husband was not infected. All informants believe that the COVID-19 vaccine can reduce the severity of COVID-19 illness. Based on the experience of informants whose friends/family were exposed to COVID-19 when they were previously vaccinated, informant 2 stated that there was no difference in getting sick from COVID-19 before and after the vaccine. The symptoms are the same because the home environment is not a group of people who are at risk, so the symptoms are mild. Therefore, some of his family and friends have not done the booster vaccine, only the second dose vaccine because they think it is not too important for the booster and also does not belong to the risk group. Meanwhile, several other informants said that there were differences in symptoms felt before the vaccine and after the COVID-19 vaccine, namely milder symptoms after the COVID-19 vaccine. It is also explained in the study of Kuciel *et al* (2022) an infection with SARS-CoV-2 during pregnancy is linked to severe illness and poor obstetric outcomes.

Obstacle

Lamptey (222), in a review manuscript on barriers to COVID-19 vaccination in pregnant women, stated that pregnant women are a barrier to vaccination because they are concerned about the vaccine's safety. Among pregnant women, miscarriage, birth defects, poor pregnancy outcomes, the risk of infertility, changes in the menstrual cycle, and the vaccine crossing the placenta are among the most frequently reported concerns regarding the COVID-19 vaccine. There is no scientific theory or evidence to support these worries. They are also concerned about their unborn children's health due to the lack of information regarding the vaccine's safety and effectiveness during pregnancy. Additionally, a prospective study by Ayhan *et al*. (2021) on 300 pregnant women at Ankara City Hospital revealed that pregnant women had low acceptance of the COVID-19 vaccination. The primary grounds for doubt or concern are the lack of data regarding the vaccine's safety during pregnancy and the possibility of harm to the fetus. Lamptey's review or paper (2022) adds that pregnant women, despite the fact that they are known to be at high risk for severe COVID-19 complications, are given little attention due to safety concerns. Due to the prevalence of COVID-19-related deaths among the elderly and comorbidly ill, pregnant women are not the only priority group. Antibody supply is designed for addressing the requirements of this populace instead of pregnant ladies.

In this study, all informants had administered the COVID-19 vaccine. However, informant 1 stated that the obstacle to COVID-19 vaccination was that she had doubts at the beginning regarding the effect of the vaccine on pregnant women. Thus, she had to ask her friends who were experienced. In addition, when asked about the presence of people who forbid pregnant women to vaccinate against COVID-19, informant 2 said that her parents were afraid and worried because she had the pregnancy of their first child and the effects after the first and second vaccines occurred again, namely fever and nausea. Another informant also added that her friend forbade her to have the vaccine during pregnancy for fear of the effects. This is consistent with the research conducted by Gustavson *et al*. Waller *et al*. (2019), 2018), and Kerr *et al*. (2017), who stated that fever during early pregnancy, a potential side effect of vaccination, has been

found to have negative pregnancy and child outcomes and may be a COVID-19 vaccination concern. Regarding vaccination priorities, when asked about the difficulty of getting a COVID-19 vaccination, informant 1 stated that she had difficulties because she had repeated illnesses. Thus, she had to postpone the booster vaccine and she had not found a place for the booster vaccine when she was healthy. Informant 4 added that the obstacle to the COVID-19 vaccination was that she had to queue for 5 hours. In view of an assessment of the accessible logical proof and best practice, all countries ought to lay out, carry out, and suggest Coronavirus immunization in pregnancy. Scientific evidence recommends periodic testing of the COVID-19 vaccine's safety for pregnant women based on emerging dynamic evidence (Lamptey, 2022). Ghamri *et al*.'s findings are in line with this. 's study from 2022, which found that it is essential to comprehend the factors that cause pregnant women to be unsure about the COVID-19 vaccine in order to develop specific strategies for resolving doubts and raising vaccination awareness.

Benefit

Vaccination is recommended when the benefits outweigh the risks. In this study, informants 1, 2, 4, and 7 said that the benefits of the vaccine are to prevent contracting COVID-19 and minimize the symptoms that arise if still infected with COVID-19. Thus, the symptoms are not severe. Regarding the question about the obligation of pregnant women to get the COVID-19 vaccine, informant 5 believed that it was not necessary. Meanwhile, informants 3, 4, 6, and 7 argued otherwise that pregnant women should get the COVID-19 vaccine. Informants 1 and 2 said that it is mandatory or not depending on the condition of the pregnant woman because there are several conditions where the pregnant woman does not fall into the category that can be vaccinated.

The opinions given by informants 1 and 2 regarding the vaccine obligation are in line with the theory and research by WHO, where the COVID-19 vaccine can be given to pregnant women if the benefits outweigh the risks. This is also in line with the findings of Ghamri *et al*.'s research (2022), which found that a vaccination program can only be deemed effective if it is widely accepted and

implemented. Assessing the perceptions of COVID-19 risk, as well as the acceptability of COVID-19 vaccination and trust in health systems and media resources, is crucial, particularly if the information is used to learn about the COVID-19 pandemic.

Cue to action

Cues to action come from internal or external factors such as the closest people or events, people, or things that move people to change their behavior. Individuals who have low motivation (such as people who are not sure they can spread disease, do not take the consequences of the disease seriously, or doubt the benefits of treatment) require a stronger push to trigger the desired response. However, for those who already have the motivation to take action, the stimulus is enough to cause a reaction.

In this study, informants 1, 2, 3, 4, and 5 said that they got information from the internet (such as Google) and social media. Beside receiving information from social media, informant 6 also received information from Kader (community members who are willing, able, and have the time to organize some activities voluntarily). Apart from WhatsApp, informant 7 also received information by visiting the primary health care where the informant would be vaccinated. Based on the exposure of several informants, they already know the dangers caused by COVID-19 through various reports. Besides, they also understand the benefits of vaccination. Even though there are some difficulties such as concerns from their family or closest friends, some of these informants have the awareness to find information about the COVID-19 vaccine for pregnant women and keep getting vaccinated. This is consistent with the findings of Hasyifah (2021) in Makassar which mentioned that informants who have a positive signal to act are higher than informants who have a negative signal towards COVID-19 vaccination. These results are also in line with the Health Belief Model theory which stated that in taking an action, an individual, there is a motivating factor to decide to accept or reject the action. Acceptance of vaccines for pregnant women in Depok is quite high. These results are consistent with a study by Skjefte *et al.* (2021), which found that more than 80 percent of pregnant women in Mexico and India accepted the COVID-19 vaccine; and less than 45

percent in the US, Australia, and Russia. In a Chinese study, Tao *et al.* (2021) also found that pregnant women's willingness to get vaccinated was positively correlated with their perceived susceptibility, benefits, and cues to action.

CONCLUSION

There are differences in perception of vaccine acceptance between the informants. The difference in vaccine acceptance is because of the educational background, and environment such as the workplace and family. In pregnant women's perception of susceptibility, the risk of contracting the virus was more or less the same in all human groups. However, patients with comorbidities have a greater risk of infection, develop disease severity more quickly, and pose a higher risk of death. In this research, all informants believed that the vaccine COVID-19 can decrease the level of severity. Some informants have obstacles when vaccinating because of information and concerns from family and friends about the after-effects of the vaccine. The decision to be vaccinated must be based on a risk-benefit analysis. The informants get information about vaccines from the internet and social media. However, few of them received information from health workers whom they consulted on pregnancy. Vaccination in pregnant women is recommended to reduce the risk to get COVID-19 and to provide immunity to the neonate. The acceptance of COVID-19 vaccination of the informant is due to the need for 1) administration; 2) awareness; 3) work. For the health office and health workers at health service providers, it is hoped that they can improve health promotion, and dissemination of vaccinations to pregnant women, and provide accurate information regarding the vaccine's safety. Socialization on the right health media is through social media. Therefore, access to appropriate information is needed so that it can be accessed by all levels of society.

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