

# Determinants of Utilization of COVID-19 Vaccination Services for Pregnant Women

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ARTICLE INFO	ABSTRACT
<b>ORCHID ID</b> Author 1: - Author 2: <a href="https://orcid.org/0000-0002-5950-9958">https://orcid.org/0000-0002-5950-9958</a> Author 3: <a href="https://orcid.org/0000-0003-1274-7593">https://orcid.org/0000-0003-1274-7593</a>	<p>The COVID-19 pandemic has caused an increase in the death rate of pregnant women. The government is taking preventive action by providing COVID-19 vaccination to pregnant women in accordance with the Circular Letter of the Ministry of Health of the Republic of Indonesia HK.02.01/I/2007/2021. Even though it has been carried out for 2 months, vaccination coverage is still low, especially in Temanggung Regency. This study aims to determine behavioral determinants in the use of COVID-19 vaccination services for pregnant women. This research uses an analytical survey method with a quantitative approach through <i>a cross-sectional study</i>. Taking 200 samples using <i>the Accidental Sampling technique</i> based on inclusion and <i>exclusion criteria</i>. Data was collected using a research questionnaire and then analyzed using <i>the Spearman Rank test</i>. The research results show that there is a weak relationship between employment status and perceived vulnerability and utilization of COVID-19 vaccination services among pregnant women. There is a fairly strong relationship between education level, perception of waiting time, and accessibility with the utilization of vaccination services for pregnant women. There is a strong relationship between attitudes, knowledge, availability of health facilities, availability of health workers, and ease of information with the use of COVID-19 vaccination services for pregnant women.</p>
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## 1. Introduction

The COVID-19 pandemic is a quite serious problem, especially for pregnant women who are about to give birth because it has a fairly high risk of transmission. In March 2020, WHO announced that COVID-19 was becoming more widespread. The Indonesian Association of Obstetrics and Gynecology (POGI) released the latest data in August 2021 which recorded that over the past year at least 536 pregnant women were positively exposed to COVID-19 and 3% of them died. In Central Java, the death rate of pregnant women during the COVID-19 pandemic has increased, from previously 530 cases of death of pregnant women (in 2020) to 867 cases (in 2021). This data is clear evidence that pregnant women, post-partum women and newborns are groups at high risk of exposure to COVID-19, which is feared to increase the morbidity and mortality rates of mothers and newborns. The government minimizes the risk of spreading COVID-19 to pregnant women by expanding the coverage of COVID-19 vaccination to pregnant women. This has been proclaimed since August 2 2021 as stated in Circular Letter HK.02.01/I/2007/2021 concerning COVID-19 Vaccination for Pregnant Women and Screening Adjustments in the Implementation of COVID-19 Vaccination.

According to (CDC, 2021) the COVID-19 vaccine available in the United States is very effective in protecting people from serious illness due to transmission of COVID-19. The CDC recommends that every individual should receive the first dose of the COVID-19 vaccine and follow-up doses when they are eligible. Based on research conducted by (Polack et al., 2020), it was found that the two-dose regimen of the BNT162b2 mRNA COVID-19 vaccine can provide 95% protection against COVID-19 in people aged 16 years or older. Through research conducted by (Tartof et al., 2021) stated that a retrospective cohort study conducted in an integrated healthcare system showed that individuals fully vaccinated with mRNA BNT162b2 had 73% (95% CI 72–74) overall effectiveness against SARS-CoV2.

The main obstacle that occurs in implementing the COVID-19 vaccination is the public's doubts about the vaccine. Based on research conducted by (Id, Abualsamen, Almomani, Al-, & Alali, 2021) states that Jordan is one of the countries with the lowest acceptance of the COVID-19 vaccine, where a fairly large percentage of the Jordanian population (36.3%) indicated refusal to be vaccinated, while 26.3% were unsure. Through research conducted by (Ichsan, Hafid, & Ramadhan, 2021) it was stated that the majority of respondents in Central Sulawesi stated that the Covid-19 vaccine was safe and effective, but only 35.3% of respondents were willing to receive the Covid-19 vaccination. Factors that influence people's willingness to receive vaccinations are age, education level, employment, marital status, religion and ethnicity.

A similar thing happened to the COVID-19 vaccination coverage for pregnant women in Indonesia, which is still quite low and far from the expected target, which is still 0.01%. In fact, data on COVID-19 vaccination coverage for pregnant women in Temanggung Regency in October 2021 was still 19.3% and the second dose was 17.3% of the target number of pregnant women, namely 2,562 people. This proves that vaccination for pregnant women experiences various obstacles, one of which is rejection of vaccination targets which occurs due to lack of information and a crisis of confidence in the importance of vaccines for pregnant women in preventing transmission of COVID-19.

According to research conducted by (Ismunandar, Renaldi, & Lita, 2022), public awareness in utilizing vaccine supplies is influenced by various factors. There are 3 characteristics that can influence the use of health services. The first characteristic is the *predisposing* or enabling characteristic, namely age, gender, marital status, education level, employment status, religion, health beliefs and race. The second characteristic is the characteristic of *empowerment* or ability which includes insurance, income, knowledge about health service needs, ability to purchase health services, availability of health service recommendations as well as their location and availability of health workers. Meanwhile, the final characteristic that influences a person's use of health services is the need characteristic, which includes individual assessment and clinical assessment of an illness (Karamelka, 2015). In this study, the indicators of marital status, insurance and ability to purchase health services were not variables because in Indonesia the COVID-19 vaccination for pregnant women and the COVID-19 vaccination for the public are free of charge and are fully borne by the government.

Based on a preliminary study conducted by researchers on 5 pregnant women in Temanggung Regency through interviews, the results showed that 2 people had carried out the COVID-19 vaccination, the reason they had the vaccine was because the agency where they

worked required vaccination. However, 3 of them have not carried out the COVID-19 vaccination. This is due to the difficulty of mobility for pregnant women in traveling to COVID-19 vaccination services. The absence of other family members to accompany them to the vaccine site has made pregnant women decide not to use the COVID-19 vaccination service. Apart from that, incorrect information makes pregnant women afraid of the effects of COVID-19 vaccination which can affect the health of the mother and fetus. This reason is supported by a statement from the Head of the KESGA Section of the Temanggung District Health Service, that the existence of *hoax information* is the main cause of low COVID-19 vaccination coverage in Temanggung Regency. Efforts have been made by the Temanggung District Health Service to carry out outreach regarding COVID-19 vaccination to avoid *hoax news* which could affect public confidence in providing COVID-19 vaccination, but people still believe more in the news circulating in the community. This is because the provision of education is not yet comprehensive in every region in Temanggung Regency. Based on this explanation, researchers want to know more about the factors related to the use of COVID-19 vaccination services for pregnant women in Temanggung Regency.

## 2. Method

This type of research uses an analytical survey with a quantitative approach through a *cross-sectional study*. This research was carried out in February – August 2022 at the Bansari Health Center, Bulu Health Center, Candiroto Health Center, and Tepusen Health Center. From data from the Temanggung Regency Health Service in October 2021, it is known that the number of pregnant women living in Temanggung Regency is around 2,562 people. The population covered was 391 pregnant women. Research sampling used the Slovin formula. The results obtained from calculations using the Slovin formula were 200 samples. The sampling technique in this study used *the Accidental Sampling technique* based on inclusion criteria (pregnant women domiciled in Temanggung Regency with gestational age > 13 weeks) and exclusion criteria (pregnant women with severe allergies, pregnant women who were not willing to be respondents, and did not fill out the questionnaire completely). Bivariate analysis used the Rank- *Spearman test*.

## 3. Results and Discussion

Table 1 presents the frequency distribution of key demographic and clinical characteristics of the study population, alongside the results of the univariate analysis. This table provides a comprehensive overview of the variables assessed, including age, gender, socioeconomic status, and relevant health indicators. The univariate analysis helps in identifying significant associations between these characteristics and the primary outcomes of interest, laying the groundwork for more detailed multivariate analyses. These findings offer valuable insights into the population under study and are crucial for understanding the underlying patterns and relationships in the dataset. From the univariate analysis the following results were obtained.

**Table 1. Frequency Distribution of Characteristics and Univariate Analysis**

<b>Demographic data</b>	<b>Frequency (n)</b>	<b>Percentage (%)</b>
<b>Mother's Age</b>		
< 20 years	1	0.5
20 – 35 years	196	98
> 35 years	3	1.5
<b>Gestational age</b>		
Trimester 1 (0 – 13 weeks)	0	0
Trimester 2 (14 – 26 weeks)	164	82
Trimester 3 (27 – 41 weeks)	36	18
<b>Utilization of Vaccination Services</b>		
Not Utilizing	49	24.5
Utilise	151	75.5
<b>Level of education</b>		
Low	42	21.0
Tall	158	79.0
<b>Job status</b>		
Not successful	79	39.5
Work	121	60.5
<b>Knowledge</b>		
Not good	81	40.5
Good	119	59.5
<b>Attitude</b>		
Not good	66	33.0
Good	134	67.0
<b>Availability of Health Facilities</b>		
Not enough	85	42.5
Good	115	57.5
<b>Availability of Health Personnel</b>		
Not enough	73	36.5
Enough	127	63.5
<b>Waiting Time Perception</b>		
Long	99	49.5
Moment	101	50.5
<b>Ease of Information</b>		
Difficult	53	26.5
Easy	147	73.5
<b>Accessibility</b>		
Difficult to achieve	84	42.0
Reachable	116	58.0
<b>Perception of Self-Vulnerability</b>		
High Vulnerability	96	48.0
Low Vulnerability	104	52.0
<b>Total</b>	<b>200</b>	<b>100.0</b>

Source: Primary Data, 2022

Table 1 shows that the highest frequency of pregnant women is aged 20-35 years (98%), with gestational age in the 2nd trimester (82%), utilizing COVID-19 vaccination services (75.5%), high education level (79%), working status (60.5%), high knowledge (59.5%), good attitude (67%), availability of good health facilities (57.5%), availability of adequate health personnel (63.5%), perception short waiting time (50.5%), ease of obtaining information (73.5%), ease of accessibility (58%), and low perception of self-vulnerability (52%).

Table 2 provides a detailed analysis of the relationship between various independent variables and the utilization of COVID-19 vaccination services. This table explores how demographic factors, socioeconomic status, health beliefs, and access to healthcare resources influence the likelihood of individuals receiving the COVID-19 vaccine. By examining these associations, the analysis highlights key determinants that may either facilitate or hinder vaccine uptake. These insights are critical for identifying target groups for public health interventions and for developing strategies to enhance vaccination coverage and achieve higher levels of community immunity. From the bivariate analysis the following results were obtained.

**Table 2. Analysis of the Relationship between Independent Variables and Utilization of COVID-19 Vaccination Services**

Variable	Utilization of COVID-19 Vaccination Services				signature	rho
	Not Utilizing		Utilise			
	N	%	N	%		
<b>Level of education</b>						
Low					0,000	0.420
Tall	25	59.5	17	40.5		
	24	15.2	134	84.8		
<b>Job status</b>						
Not successful					0.003	0.206
Work	28	35.4	51	64.6		
	21	17.4	100	82.6		
<b>Attitude</b>						
Not good	47	71.0	19	29.0	0,000	0.762
Good	2	1.5	132	98.5		
<b>Knowledge</b>						
Not good	47	58.0	34	42.0	0,000	0.643
Good	2	1.6	117	98.4		
<b>Availability of Health Facilities</b>						
Not enough	47	55.3	38	44.7	0,000	0.616
Good	2	1.7	113	98.3		
<b>Availability of Health Personnel</b>						
Not enough	45	61.6	28	38.4	0,000	0.655
Enough	4	3,2	123	96.8		
<b>Waiting Time Perception</b>						
Long	43	43.4	56	56.6	0,000	0.436
Moment	6	5.9	95	94.1		
<b>Ease of Information</b>						
Difficult	37	69.8	16	30.2	0,000	0.633
Easy	12	8.2	135	91.8		
<b>Accessibility</b>						
Difficult to achieve	43	51.2	41	48.8	0,000	0.528
Reachable	6	5.2	110	94.8		
<b>Perception of Self-Vulnerability</b>						
High Vulnerability	36	37.5	60	62.5	0,000	0,290
Low Vulnerability	13	12.5	91	87.5		

Source: Primary Data, 2022

Table 2 shows that there is a weak relationship between employment status variables and perceived self-vulnerability and the use of COVID-19 vaccination services among pregnant women. The Spearman Rank test shows that there is a weak relationship between employment status and the use of COVID-19 vaccination services for pregnant women in Temanggung Regency. These results are in line with research conducted by (Londo et al., 2017) at the Tahuna West Community Health Center which found that there was a relationship between work and the use of health services. In order to increase vaccination outcomes for pregnant women who do not work, the Indonesian Ministry of Health has issued regulation Number 10 In 2021 article (1) concerning the implementation of the Mutual Cooperation COVID-19 vaccination. Mutual cooperation vaccination is a vaccination for employees and families. This means that all employee family members must receive vaccinations. In this case, pregnant women who do not work and have family members who work in the formal sector are required to vaccinate against COVID-19. However, until now this has not been realized because the company or the government have not given strict sanctions. Efforts that can be made to overcome this are through cooperation between the Minister of Health and the Minister of Industry in giving a firm recommendation that employees and all their family members have been vaccinated, with proof of family members' vaccine cards. Employees who do not comply must be given a warning, a letter of reprimand, a salary cut or even dismissed (Muis, 2013).

The weak relationship between perceived self-vulnerability and utilization of COVID-19 vaccination services among pregnant women in Temanggung Regency, means that if someone feels they have low self-vulnerability (does not have comorbid diseases and is not worried about the impact of COVID-19 vaccination) then it will be greater possibility to utilize COVID-19 vaccination services. This is in line with the results of research conducted by (Nanik, 2012) at the Sumber Rejo Community Health Center, Balikpapan City which proves that there is a significant relationship between perceptions of self-vulnerability and the use of health services with  $p$  value = 0.008. Perception of susceptibility to disease is one of the things that can encourage someone to accept healthy behavior (Alfiani, 2019). The research results show that pregnant women who have a high self-vulnerability status tend not to utilize vaccination services. This is due to individual concerns regarding the impact of COVID-19 vaccination on maternal and fetal health. According to research, these concerns can be minimized with consultation. Where the decision to utilize or not utilize health services is not only based on individual judgment, but needs to be studied and consulted with parties who understand this matter better (Sa'adah & Azmi, 2022).

There is a fairly strong relationship between the variables of education level, perception of waiting time, and accessibility and the utilization of COVID-19 vaccination services for pregnant women. Based on the results of the relationship test with *Spearman Rank*, it is known that there is a fairly strong relationship between education level and the use of COVID-19 vaccination services for pregnant women in Temanggung Regency. This is in accordance with the results of research conducted by (Sari & Handayani, 2020) that there is a significant relationship between education and the use of health services with  $p$  value = 0.000. The low level of education can be reduced by government regulations, namely Minister of Education and Culture Regulation Number 80 of 2013 concerning Universal Secondary Education or 12 years of compulsory education. In this way, it is hoped that each individual will at least have a greater opportunity to expand their horizons or knowledge. When an individual is able to reach a higher level of education, the individual will more easily receive information and understand the importance and benefits of the health services they will need. Thus, respondents with

higher education are more likely to utilize the health services they need compared to respondents with low education (Putra & Podo, 2017) .

The results of this research prove the truth of Andersen's (1995) theory which states that waiting time is a supporting factor that can influence whether a person uses or not the available health services. The results of this research are in line with research conducted by (Kurniawan, 2019) which stated that there was a significant relationship between the perception of waiting time and the utilization of health services at TK.II Moh Hospital. Ridwan Meuraksa, East Jakarta, where  $p$  value = 0.029. Waiting time is a problem that often causes patient complaints. The majority of patients will decide to use or not use health services based on their estimated waiting time. They tend to think about how long it will take them to get the health services they want. The more flexible or shorter the waiting time, the more likely someone is to take advantage of the health services they need. To be able to overcome long waiting times due to implementation that is not on time, it is necessary to increase discipline for health service providers carried out by the person responsible for implementing the activity by socializing work discipline and supervision during the activity. Apart from that, adequate health workers are needed both in terms of number and performance. This can be done by increasing the number of human resources through collaboration with educational institutions in the regions, especially in the health sector (Vonna, 2022) .

Based on the research results, it can be concluded that there is a fairly strong relationship between accessibility and utilization of COVID-19 vaccination services for pregnant women in Temanggung Regency. This means that if access to health service locations is easy to reach, then people will have a greater opportunity to be able to utilize these services. The accessibility referred to in this research is the ease with which people can access health services from home as measured by affordability, distance, ease of mobility, etc. With health services close to home, adequate transportation facilities, low costs, and the presence of accompanying family members, a person will be more likely to want to use health services.

There is a strong relationship between the variables of knowledge, attitudes, availability of health facilities, availability of health workers, and ease of information with the use of COVID-19 vaccination services. The research results show that there is a fairly strong relationship between knowledge and the use of COVID-19 vaccination services for pregnant women in Temanggung Regency. Pregnant women with poor levels of knowledge tend not to utilize health services. This is caused by a lack of knowledge among pregnant women regarding the requirements that pregnant women must fulfill to be able to get the COVID-19 vaccination, the types of vaccines recommended for pregnant women, and the importance of preventing transmission of COVID-19. 19 for pregnant women.

Knowledge is the result of sensing an object, namely people's understanding of information about a particular object (Argista, 2021) . The knowledge a person has can influence his understanding which can make a person feel the need for what he knows. The wider a person's knowledge about vaccination, the greater the person's tendency to utilize vaccination services. To increase the utilization of health services, the government must increase the knowledge of pregnant women by providing education and discussions so that pregnant women feel confident and motivated to utilize the available health services (Abebe et al., 2022) . Providing education can be done through counseling by the District Health Service regarding COVID-19 vaccination for pregnant women to health workers at community health

centers or to pregnant women directly. This can be measured using pretest and posttest when carrying out extension activities. Apart from that, the Health Service can also take advantage of technological advances, especially social media, as a means of conveying information to the public regarding vaccination implementation in a more creative and informative manner (Samannodi, 2021) .

In this study, the results showed that there was a strong relationship between attitudes and the use of COVID-19 vaccination services for pregnant women in Temanggung district. The reason some respondents did not use health services was because they felt that COVID-19 vaccination was not important for their health. Apart from that, there are still some respondents who feel that they do not need COVID-19 vaccination because the vaccinations distributed are considered unsafe for pregnant women. Attitude is a person's reaction or response to a stimulus or object that involves opinions and emotional factors. Someone who has a good attitude tends to be ready to help, pay attention and do something for the object. Factors that can influence a person's attitude include personal experience, the influence of other people, and mass media (Azwar, 2013) . According to research, a person's attitude in utilizing health services is influenced by their level of knowledge. Therefore, the government, especially the Health Service, needs to provide outreach regarding COVID-19 vaccination which can increase a person's knowledge. If knowledge increases, indirectly someone will behave well or in this case someone will support the implementation of the use of available health services (Singal, 2018) .

Health facilities are public facilities that can influence community productivity because they are needed to improve the level of public health (Khoeriyah, 2013) . The availability of good health facilities, namely in the form of facilities and infrastructure that support the implementation of COVID-19 vaccination activities, can provide a sense of security and comfort for users. The results of the relationship tests that have been carried out can be concluded that there is a strong relationship between the availability of health facilities.

As many as 85 out of 200 respondents thought that health facilities were available in every health service. However, existing facilities cannot provide safety and comfort for pregnant women. Therefore, it is necessary to improve the quality and quantity of health facilities at COVID-19 vaccination service locations. The quality of health facilities can be improved regularly and the available infrastructure can be updated (Kholidah, 2019) . This can be done by conducting an evaluation at the end of the activity by the service provider, so that it can be known exactly what facilities and infrastructure to support the implementation of vaccination services are still lacking to be used as reference material for implementation. next vaccination activity. Apart from routine maintenance, the government, especially the Ministry of Health, must also ensure that the funds provided to health agencies for the implementation of COVID-19 vaccination services are sufficient to provide updates to the basic infrastructure supporting vaccination services (Hendrisman, Sutomo, Arnawilis, Hartono, & Lita, 2021) .

The research results show that there is a close relationship between the availability of health workers and the utilization of COVID-19 vaccination services for pregnant women in Temanggung Regency. The availability of health workers certainly influences the improvement of all aspects of the health service system. The presence of adequate and qualified health personnel will make people more confident in the quality of services provided, so that people tend to want to use health services (Mahendra, Supriyadi, & Yulis, 2019) . To be able to improve



quality and competency, it is necessary to provide regular training to health workers. In this case, the District Health Service must provide training to health workers at all health centers regarding the implementation of COVID-19 vaccination. This can be done by sending a delegation from the District Health Service to each community health center to provide training regarding COVID-19 vaccination. In this way, it is hoped that the majority of health workers at each community health center will be able to understand and implement the material obtained (Kasmalena, Deswarta, 2021) .

It can be seen that the majority of respondents think that information regarding COVID-19 vaccination can be accessed easily. Respondents believe that they easily get information from information media, communication tools, or people around them from trusted sources. In fact, they tend to easily get information regarding the COVID-19 vaccination schedule, COVID-19 vaccination locations, and what types of vaccines are available at vaccination service locations. Based on the results of research that has been carried out, it can be concluded that there is a strong relationship between ease of information and the use of COVID-19 vaccination services for pregnant women in Temanggung Regency.

Ease of information has a very important role in supporting someone to utilize health services. Even though the service at this place is of high quality and very satisfying, if people have never heard or known this information then people will not be convinced and will tend to decide not to use the service. However, the amount of information that is spread widely throughout society makes it difficult for people to differentiate between valid information and hoax information. Most lower middle class people will relatively accept all incoming information without being filtered or confirming its truth first. As a result, quite a few people decide not to use health services because they are afraid that something bad will happen due to people's distrust of health services. Therefore, it is necessary to have meaningful discussions through various platforms between service providers and the public in order to eliminate people's feelings of doubt and distrust regarding the information provided by health services (Sznajder et al., 2022) . Apart from that, education regarding the importance of COVID-19 vaccination in preventing door-to-door transmission of the corona virus to pregnant women can be carried out by forming a special task force by the District Health Service. This activity is carried out so that people do not get caught up in miscommunication or hoax news. In this way, it is hoped that it can increase the confidence and motivation of pregnant women to want to take advantage of COVID-19 vaccination services (Manyullei, Syakinah, Adeswita, & Qathifah, 2022) .

Research conducted by Yollanda in 2018 at the Makassar City Health Center and Medan Health Center proved that there is a relationship between education, employment, knowledge and complaints of illness as well as ownership of health insurance and use of health services. Apart from that, Maghfirah's other research in 2017 found that perception, health facilities, education, family income, doctor's services, employment, ease of information, accessibility, service costs and cost coverage had a significant relationship to the use of health services. This proves that there are various factors that can influence a person's behavior. Service utilization

Researchers are aware that there are limitations/weaknesses in this research, namely, the data collection plan which should have used data on pregnant women from community health centers was not carried out according to plan. This happened because the midwife coordinators at the four community health centers did not have data on pregnant women in

their work areas. Therefore, to overcome this obstacle, research data collection was replaced with an *accidental sampling technique* with the help of midwife coordinators at the four community health centers who coordinated directly with village midwives to distribute research questionnaires and contributed to ensuring that pregnant women filled out research questionnaires. Apart from that, the instruments used in this research were prepared by the researchers themselves based on the literature which was then developed and modified in such a way to suit the aspects they wanted to research. To avoid bias in research, validity and reliability tests were carried out before collecting data using research instruments.

However, this research has been carried out properly and avoided bias as much as possible, so that it is able to explain the determinants of the use of health services, especially COVID-19 vaccination for pregnant women. Therefore, it is hoped that the results of this research will be able to provide benefits and be useful for improving and developing related programs.

#### 4. Conclusion

Based on the results of the research that has been conducted, it can be concluded that there is a weak relationship between the variable employment status and the perception of self-vulnerability and the use of COVID-19 vaccination services for pregnant women in Temanggung Regency. There is a fairly strong relationship between education level, perception of waiting time, and accessibility and utilization of COVID-19 vaccination services among pregnant women in Temanggung Regency. And there is a strong relationship between attitudes, knowledge, availability of health facilities, availability of health workers, and ease of information with the use of COVID-19 vaccination services for pregnant women in Temanggung Regency. From the research results, it is known that Andersen's theoretical factors that greatly influence the use of COVID-19 vaccination services are supporting or enabling factors.

Suggestions to the District Health Service include, among others, the District Health Service needs to form and optimize a regional task force for outreach and providing door to door vaccinations, there needs to be management of vaccination implementation by health workers, there needs to be management of vaccination implementation by health workers, socialization of discipline for health workers, There needs to be training for health workers by the District Health Service, as well as the establishment of consultation services for pregnant women who have a high perception of self-vulnerability. Apart from that, pregnant women are expected to be able to play a positive and active role in seeking information related to improving maternal and child health, especially information regarding COVID-19 vaccination services for pregnant women.

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