

## Factors Affecting COVID-19 Vaccination In Pregnant Women at The Padang Tikar Health Center

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### ABSTRACT

COVID-19 vaccination for pregnant women can prevent the risk of exposure to COVID-19, but there are still concerns for pregnant women regarding the contents, side effects and impact of vaccination. So it has a low impact on pregnant women's acceptance of Covid-19 vaccination. The aim of this research is to analyze the factors that influence pregnant women towards COVID-19 vaccination at the Padang Tikar Community Health Center 2022. The research design used is a mixed method, using an analytical observational approach with a purposive sampling technique, with a quantitative sample of 30 respondents and 5 qualitative informants. Data analysis is univariate, bivariate and multivariate. The research results show that the most dominant variable is attitude with a value of OR = 10.482 (95% CI OR 1.364-80.535) meaning that pregnant women who have a less supportive attitude are more at risk of not getting the Covid-19 vaccination, namely 10.482 times more than pregnant women who have supportive attitude towards Covid-19 vaccination. In conclusion, it is hoped that health workers will educate about Covid-19 vaccination by providing support so as to increase the positive attitude of pregnant women.

**Keywords:** *Pregnancy, Vaccination, Covid-19*

### INTRODUCTION

The world has been hit by one of the most widespread and significant public health crises in decades as Covid-19 has become one of the leading causes of death internationally. The 2019 coronavirus disease (COVID) pandemic caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-19) is the most pressing challenge to humanity in a century. It is widely believed that pre-pandemic normalcy will never return until a safe and effective vaccine strategy is available and a global vaccination program is successfully implemented (Whitehead & Walker, 2020).

However, pregnant women are a category of people who are at high risk of contracting Covid-19. Women who are pregnant are a group that is vulnerable to being exposed to the coronavirus. Pregnant women who are confirmed to have COVID-19 require special care, hospitalization will be increased, and infection with this virus in pregnant women can result in death kematian (Zambrano et al., 2020). According to several previous studies, pregnant women with confirmed Covid-19 have a higher risk of giving birth prematurely or with low birth weight as well as postpartum bleeding and other complications requiring cesarean section caesar (Ong et al., 2020).

American College of Obstetricians and Gynecologists and Society for maternal-fetal medicine asked the Food and Drug Administration to include pregnant women in approving the urgent use of Covid-19 vaccines due to the risks of Covid-19. Each has issued guidance supporting offering COVID-19 vaccines to pregnant people (ACOG, 2021). Although pregnant women are at greater risk, the safety of perinatal vaccines is presented to assist providers in making shared decisions regarding administering

vaccines to this group, including health care workers who are pregnant, breastfeeding, or considering pregnancy (DinKes, 2021). Based on WHO data, this corona virus disease has caused 4.55 million deaths in the world, with more than 4,229,813 reported in Indonesia as confirmed positive for Covid-19 and 142,763 resulting in death. To date, at least 35,099 cases of pregnant women in Indonesia have been confirmed positive for Covid-19 (Stafford et al., 2020).

To protect pregnant women and their babies from COVID-19 infection, the government is providing Covid-19 vaccination efforts targeting pregnant women which have been recommended by the National Immunization Expert Advisory Committee (ITAGI), by issuing a circular letter HK.02.01/I/2007/2021 concerning Covid-19 vaccination for pregnant women and adjustments to screening in the implementation of Covid-19 vaccination (Kementrian Kesehatan, 2021).

Pregnant women who are confirmed to have Covid-19 are more at risk of giving birth prematurely. Research so far also states that confirmed pregnant women are at risk of experiencing severe Covid-19 symptoms and need to undergo intensive care in the ICU, therefore pregnant women are recommended to get the COVID-19 vaccine. 19 which is given at 13 weeks of gestation or the second trimester (Shende et al., 2021). Based on a Ministry of Health Decree issued in August 2021, the Covid-19 vaccine that can be used for pregnant and breastfeeding women in Indonesia is the Sinovac, Pfizer, and Moderna vaccines

Based on (SATGAS COVID-19, 2022) The vaccination target to achieve herd immunity in Indonesia is 208,265,720 people. The number of people who have been vaccinated against COVID-19 is the first dose of 201,131,104 people (96.67%), the second dose of 168,429,070 (80.87%), and the third dose (booster) of 48,844,513 people (23.45 %). The number of targets in vulnerable and general communities is 141,211,181 people. With a target number of first doses of 114,692,480 (81.22%), second doses of 94,747,257 (67.10%), and third doses of 32,566,765 (32.06%). Implementation of vaccination in West Kalimantan province with a target of 3,463,154 (89.43%) first-dose vaccinations, 2,808,919 (72.54%) second doses, and 534,270 (13.80%) third doses. Meanwhile, in Kubu Raya Regency, the first dose was 340,333 (78.66%), the second dose was 261,707 (60.34%) and the third dose was 70,458 (16.28%) (SATGAS COVID-19 KALBAR, 2022).

A preliminary study conducted at Pukesmas Padang Tikar revealed that the first dose of the Covid-19 vaccine had a coverage rate of 27%, falling short of the targeted 100%, while the second dose had only reached 18%. Despite being a government initiative mandated by the Ministry of Health Circular Letter Number HK.02.01/I/2007/2021, which implements national Covid-19 vaccination for pregnant women with adjusted screening starting August 3, 2021, many pregnant women remain hesitant to receive the vaccine. Concerns include fears of potential birth defects, aversion to injections, and prevalent misconceptions that the Covid-19 vaccine is unsuitable for pregnant women, compounded by lack of support from spouses or families. The aim of this research is to determine the factors that influence pregnant women towards Covid-19 vaccination at the Padang Tikar Community Health Center

## METHOD

This research design uses mixed quantitative and qualitative methods. Quantitative research uses analytical observational research with a cross-sectional design, while the qualitative approach uses triangulation. The population in this study were all pregnant women over 12 weeks of gestation who visited the Padang Tikar Community Health Center, 33 pregnant women with a quantitative sample of 30 people using purposive sampling techniques with inclusion and exclusion criteria. The qualitative sample consisted of 5 informants, namely the Head of the Padang Tikar Community Health Center, the Head of the Covid-19 Vaccine Program and 33 pregnant women.

The variables in this research are: independent consisting of knowledge, attitudes, husband's support, social culture and the role of health workers, the dependent variable is the Covid-19 vaccine and the counterfunding variables are socio-economic and trust. Data collection was carried out using questionnaires on knowledge, attitudes, husband's support, social culture and the role of health workers regarding Covid-19 vaccination for pregnant women.

Quantitative data analysis uses univariate to determine the distribution and characteristics of the data. Bivariate analysis uses the chi square test with a significance limit of 5% and calculates the odds ratio (OR) with a 95% confidence interval to determine the relationship between the independent and dependent variables. Multivariate analysis with multiple logistic analysis uses the backward method with a significance level  $> 0.1$  to determine the independent variable that has the greatest influence on the dependent variable. Analyze qualitative data by reducing, displaying, drawing conclusions and verifying. The ethical permit number for this research is 022/KEPK/VIII/2022 which was issued by the Yogyakarta Health Research Ethics Commission STIKes Guna Bangsa Yogyakarta.

## RESULT

**Bivariate Analysis** to see the relationship between the independent variables (knowledge, attitudes, husband's support, social culture and the role of health workers) on the dependent variable (covid-19 vaccination), using the chi square statistical test with no significance at  $p < 0.05$ .

**Table 1|** The Relationship between Knowledge, Attitudes, Husband's Support, Social Culture, and the Role of Health Workers with Covid-19 Vaccination for Pregnant Women at the Padang Tikar Community Health Center in 2022

No	Respondent's Characteristics	Covid-19 Vaccination for Pregnant Women						P-Value	OR
		No		Yes		Amount			
		F	%	F	%	F	%		
1.	<b>Knowledge</b>								
	Good	1	3.3%	6	20%	7	23.3%	0.011	0
	Enough	11	36.7%	5	16.7%	16	53.5%		
	Not enough	6	20%	1	3.3%	7	23.3%		
2.	<b>Attitude</b>							0.002	16,000
	Positive	2	6.7%	8	26.7%	10	33.3%		
	Negative	16	53.3%	4	13.3%	20	66.7%		
3.	<b>Husband's Support</b>							0.005	17,000
	Support	1	3.3%	6	20%	7	23.3%		
	Does not support	17	56.7%	6	20%	23	76.7%		
4.	<b>Socio-Cultural</b>								
	Good	13	43.3%	10	33.3%	23	76.7%		

5.	Not good	5	16.7%	2	6.7%	7	23.3%	0.481	1.923
	<b>The Role of Health Workers</b>								
	Good	15	50%	10	33.3%	25	83.3%		
	Not good	3	10%	2	6.7%	5	16.7%	1,000	1,000

Source: *Chi-Square test*

Based on the table above, the knowledge variable has a sig-p value = 0.011 or  $< \alpha$  value = 0.05, meaning that knowledge is significantly related to Covid-19 vaccination in pregnant women. based on the value OR = 0  $<$  1, it shows that knowledge is not a factor that can increase the administration of the Covid-19 vaccine to pregnant women.

The attitude variable has a sig-p value = 0.001 or  $< \alpha$  value = 0.05, meaning that attitude is significantly related to Covid-19 vaccination in pregnant women. Based on the value OR = 16,000  $>$  1, it shows that attitude is a factor that can increase the administration of the Covid-19 vaccine to pregnant women. Pregnant women who have a positive attitude are at risk of getting the Covid-19 vaccine 16 times.

The husband's support variable has a sig-p value = 0.005 or  $< \alpha$  value = 0.05, meaning that husband's support is significantly related to Covid-19 vaccination in pregnant women. Based on the value OR = 17,000  $>$  1, it shows that husband's support is a factor that can increase Covid-19 vaccination in pregnant women. Pregnant women who have their husband's support are at risk of experiencing the Covid-19 vaccine 17 times.

The socio-cultural variable has a sig-p value = 0.481 or  $> \alpha$  value = 0.05, meaning that social culture is not significantly related to Covid-19 vaccination in pregnant women. Based on the value OR = 1.923  $>$  1, it shows that social culture is a factor that can increase the administration of the Covid-19 vaccine to pregnant women. Pregnant women who have social and cultural backgrounds are at twice the risk of experiencing the Covid-19 vaccine.

The variable role of health workers has a sig-p value = 1 or  $> \alpha$  value = 0.05, meaning that the role of health workers is not significantly related to Covid-19 vaccination in pregnant women. Based on the value OR = 1,000  $>$  1, it shows that attitude is a factor that can increase the administration of the Covid-19 vaccine to pregnant women. Pregnant women who have a good health workforce are at risk of getting the Covid-19 vaccine when compared.

**Multivariate Analysis** with multiple logistic analysis using the backward method with a significance level  $>$  0.1 to find out the independent variable that has the most influence on the dependent variable.

**Table 2| Results of Multiple Regression Tests for Stage 1 and Stage 2 using the Backward Method**

Covid-19 Vaccination for Pregnant Women							
Stage 1	Variable	B	Sig.	EXP (B)	Omnibus	Nagelkerke square	R
	Knowledge	0.509	0.728	1,663			
	Attitude	1,847	0.119	6,342			
	Husband's support	1,951	0.182	7,033	0.001	0.501	
Constant		-2,247	0.69	0.106			
Stage 2	Attitude	2,350	0.24	10,482			
	Husband's support	2,258	0.82	9,567			
Constant		-1,719	0.007	0.179			

Source: Logistic Regression Test

Based on the table above, the variables that are significantly related to Covid-19 vaccination in pregnant women are the husband's attitude and support. Meanwhile, the knowledge variable was removed from the model because there was no change in OR > 10%. The model formed was declared feasible, because it met the significance of the model as seen from the omnibus test value (p=0.001). Based on the Nagerkerke R Square, the obtained value = 0.501, meaning that the independent variables contained in the model can explain the incidence of Covid-19 vaccination in pregnant women by 50.1%. The most dominant variable related to the incidence of the Covid-19 vaccine in pregnant women is attitude with OR = 10,482 (95% CI OR: 1,364-80,535). This means that pregnant women who have an unsupportive attitude are more at risk of not getting the Covid-19 vaccination,.

**Qualitative research results,** is a researcher's interpretation of a researcher's phenomenon in the form of a description.

**Table 3 | Themes and Informant Statements**

Themes	Informant Statements
Knowledge of Covid-19 Vaccine	<p>“Eem.., if I'm not mistaken, the Covid vaccine is for pregnant women, Ee.. so that they don't get sick from the Covid-19 virus, such as fever, coughing, body aches and not being able to smell.” (informant 1).</p> <p>“Ee... The most inhibiting factor is... there is still a lack of knowledge about vaccinating pregnant women for the health of themselves and their babies, so there are still pregnant women who refuse because they are afraid of getting a fever after being vaccinated.” (informan 5)</p>
Attitude of covid-19 vaccination	<p>“Eh....I'm not ready for the vaccine, because it's not clear whether the vaccine is halal or haram and people who are given the Covid-19 vaccine are still infected with Covid-19.” (informan 2)</p> <p>“Yes, in my opinion there is no need to vaccinate during pregnancy as long as you are still in good health, because I am also worried that the contents of the vaccine are still unclear and could pose a risk to my baby.” (informan 3)</p> <p>“hm... The inhibiting factor is that public awareness is still low, hmm, they think that it is still not very important to administer the Covid vaccine to pregnant women even though the government has established a mandatory Covid vaccination program for pregnant women. However, now it has helped a little with the Direct Cash</p>

	Assistance Program because they are required to be vaccinated when taking BLT, but awareness itself is still low.” (informan 4)
Husband's support with Covid-19 vaccination	<p>“um..my husband won't allow me to be vaccinated, my husband said, we don't know what ingredients are contained in the vaccine and it's still not clear whether the vaccine is halal or haram, and if something happens who will be responsible?, so hearing what My husband said, I was afraid to take the vaccine.” (informan 1)</p> <p>“My husband and family forbade me from getting vaccines, they said that my children would get sick, so far there have been no vaccines and all my children are healthy, just wear a mask if they want to go out.” (Informan 2)</p> <p>“Erm, for the health workers themselves, the health workers have been quite optimal and maximal in promoting Covid-19 vaccination for pregnant women. But pregnant women cannot make decisions on their own, because they have to discuss it with their husband or parents. Even though pregnant women want to be vaccinated, their families forbid them. Yes, I think making decisions is also difficult.” (Informan 4)</p>
Social culture with Covid-19 vaccination	<p>“Hmm, religion doesn't forbid it, culture doesn't forbid the Covid vaccine, but I'm afraid that after the vaccination I'll get a fever and end up in the hospital.” (informan 3)</p> <p>“Yes. If this culture still exists in certain tribes, it is true that they still refuse this vaccination, perhaps because of issues regarding the contents of the vaccine which are still not clear about halal and haram, as well as rumors about the impact of the vaccine. can cause fever and even seizures. being admitted to hospital, maybe this has something to do with the mother's knowledge, especially since there is a lot of social media that the mother watches which is against vaccines and says that vaccination is not an advice from the health service, the Minister of Health, WHO. who are more likely to refuse the vaccine.”(informan 5)</p>
The role of health workers with the covid-19 vaccine	<p>“Every time there is a class for pregnant women, the midwife always recommends the vaccine, because it can protect pregnant women from the Covid virus, but I am still afraid of the vaccine. Many facilities for Covid-19 vaccination are provided at village halls, community health centers, schools, posyandu, even at markets.” (informan 1)</p> <p>” Ummm, usually health workers also come out to provide counseling and guidance to the community, but in reality not all people can receive it, and this is also an obstacle because the work area is quite large and the condition of people who are still working. so it is difficult to gather them to provide counseling or direction about the importance of the Covid 19 vaccine”. (informan 5)</p> <p>Over the last 6 months, the achievement of the first dose of Covid-19 vaccination has only reached 53% and the second dose around 30%. Still not reaching the government's target. Pregnant women who use JAMPERSAL or BPJS, even though they have not been vaccinated, are still served for the safety of the mother and child. Aaa... so what I mean is that the government must be able to provide conditions for patients who use JAMPERSAL or BPJS to be vaccinated, so that it will increase the achievement of the Covid-19 vaccine. (informan 4)</p>

*Source: Qualitative data*

### **The Relationship between Knowledge and Covid-19 Vaccination**

Knowledge significantly influences Covid-19 vaccination uptake among pregnant women, as indicated by a sig-p value of 0.011, which is less than the  $\alpha$  value of 0.05. According to Notoatmodjo (2018), knowledge plays a crucial role in shaping sustained behavior compared to actions based on less informed decisions. This is supported by Pratiwi's study in 2022. Pregnant women with low knowledge are 7.062 times more likely to refuse vaccination compared to those with high knowledge (Sultan Mahmud et al., 2021). Similarly, Mohamed et al. (2021) found that despite inadequate knowledge, a majority of respondents (64.5%) were willing to receive the Covid-19 vaccine. Interviews with pregnant informants revealed widespread awareness of the vaccine, sourced mainly from friends, social media, and health workers, although detailed understanding and misconceptions about its meaning, benefits, and impacts remain prevalent.

The most common symptoms of Covid-19 are fever, dry cough and fatigue, other symptoms are aches and pains, stuffy nose, headache, conjunctivitis, sore throat, diarrhea, loss of sense of taste or smell, rash on the skin (WHO, 2022). Overall, we understand, but there are still errors and lack of information in the informant. Acceptance of the Covid-19 vaccine is still low, one of the reasons is the lack of education regarding the benefits of the Covid-19 vaccine and the risks that the Covid-19 vaccine can pose to pregnant women taking the Covid-19 vaccine (Baudou et al., 2020). Based on research Untari dkk, 2022 there is a relationship between knowledge of pregnant women and participation in Covid-19 vaccination (Untari Sri, 2022).

Based on research conducted (Kumari et al., 2020) there is an increase in knowledge about the Covid-19 vaccine in pregnant and breastfeeding women ( $p < 0.001$ ), they believe the vaccine is not dangerous and see it as a social responsibility. This is in line with research (Ellington et al., 2021), based on data obtained through the CDC and FDA reported in VAERS, they did not find any safety problems in pregnant women who received the Covid-19 mRNA vaccination or in their babies. Studies conducted (Collier AY, 2021) the impact of the vaccine on pregnant women who experience fever as much as (14%) and breastfeeding women as much as (44%), as well as non-pregnant women (52%) Binding, neutralizing and functional non-neutralizing antibody responses as well as CD4 and CD8 T cell responses are present in women pregnant, breastfeeding and not pregnant after vaccination. Based on data (Vaers, 2020), completing a second dose of mRNA vaccine in pregnant women can protect babies under 6 months of age from the Covid-19 virus

### **The Relationship between Attitude and Covid-19 Vaccination in Pregnant Women**

The attitude variable has a sig-p value = 0.001 or  $< \alpha$  value = 0.05, meaning that attitude is significantly related to Covid-19 vaccination in pregnant women. Attitude is a form of evaluation or definitive feeling reaction, namely the state of the soul and state of thinking in responding to an object through experience and influencing directly and indirectly on practice or action. Attitudes

clearly show the connotation of the suitability of emotional reactions to social stimulation ((Notoatmodjo, 2018).

The research by Linda and Estri (2020) reveals that perceptions of Covid-19 vaccine effectiveness influence willingness to vaccinate. Similarly, Elhadi et al. (2021) found that respondents consider the Covid-19 vaccine crucial for maternal and child health, believing it reduces morbidity and mortality. Al-zalfawi et al. (2021) emphasize that while knowledge and attitudes positively affect vaccine acceptance, there remains insufficient information specific to pregnant women and children over 12 years old. Silva's study (2022) reinforces these findings, showing that perceptions, knowledge, and attitudes impact vaccine hesitancy.

Negative attitudes towards Covid-19 vaccination among pregnant women are prevalent, leading to reluctance to vaccinate, as observed in various studies (Gencer, Özkan, & Vardar, 2022). Concerns about vaccine impact and unclear vaccine contents contribute to hesitancy reported in internet forums (Gencer, Özkan, & Vardar, 2022). Additionally, Desmond Sutton et al. (2021) note that fear of vaccine side effects on babies leads pregnant women to avoid vaccination. Safety concerns, highlighted in studies by Kumari et al. (2020) and Ahmed Khan et al. (2021), underscore the need for reassurance on vaccine efficacy and safety before vaccination decisions are made. Mannan (2020) suggests that trust in government information sources increases vaccine acceptance and willingness to adopt preventive measures against Covid-19.

In contrast to previous research, the Covid-19 vaccine safety study from the Pregnancy Registry surveillance and Vaccine Adverse Event Reporting System (Vaers, 2020), Several types of Covid-19 vaccines that are safe for pregnant women include the Covid-19 mRNA vaccine (Pfizer-BioNtech, Moderna), the J&J / Janssen Covid-19 vaccine, the Sinovac-coronaVac Covid-19 vaccine. This is in line with the circular letter (Kemenkes, 2021) Pfizer and Moderna are among the types of vaccines recommended for pregnant women.

Refusal of the Covid-19 vaccine is closely related to perception, knowledge and attitudes, health education outreach is needed to change the determining factors which can potentially help overcome refusal of the Covid-19 vaccine and achieve wider coverage of the Covid-19 vaccine.

### **Relationship between Husband's Support and Covid-19 Vaccination in Pregnant Women**

The husband's support variable has a sig-p value = 0.005 or  $< \alpha$  value = 0.05, meaning that husband's support is significantly related to Covid-19 vaccination in pregnant women. Husband's support is a form of interaction in which there is a relationship of mutual give and take. Husband's support is very important in building a positive atmosphere because it will give the mother her own strength (Maimunah et al, 2021).

Husband's support has an important role in making decisions regarding the Covid-19 vaccine for pregnant women based on research (Pairat & Phaloprakarn, 2022) acceptance of attitudes towards Covid-19 vaccination among pregnant women (60.8%) where husbands support carrying out the Covid-19 vaccine.



According to the results of this research, the husband's support for carrying out Covid-19 vaccination in pregnant women greatly influences the desire and courage of pregnant women in carrying out Covid-19 vaccination for the health of the mother and baby. In this study, the majority of respondents did not receive support from their husbands in administering the Covid-19 vaccine to pregnant women. From the description of husband's support, it can be ascertained that pregnant women who do not receive husband's support tend to refuse the Covid-19 vaccine. Likewise, pregnant women who have the support of their husbands will tend to get the Covid-19 vaccine. In this research, it is very clear the influence of husband's support with Covid-19 vaccination on pregnant women.

Based on the results of interviews with informants regarding the support of husbands or family in administering the Covid-19 vaccine to pregnant women, it was stated that the husband did not support carrying out the Covid-19 vaccination because he still had doubts about the contents of the Covid-19 vaccine and also thought that using a mask could prevent transmission of Covid-19.

Based on research studies (Du et al., 2020) reported that 12.6% showed presymptomatic transmission. The presymptomatic period is due to the virus spreading through droplets or contact with contaminated objects. Vaccines are one of the ways needed to increase immunity and reduce disease and prevent Covid-19 according to (Kemenkes, 2022), implementing new habit adaptations by implementing health protocols in every activity, studies conducted (Makmun & Hazhiyah, 2020). The Covid-19 vaccine is the most effective way to prevent the spread of the corona virus. This is in line with research (Dipiazza et al., 2020), cellular immunity plays an important role in limiting the severity of disease caused by the corona virus, the rapid expansion of memory lymphocytes induced by Covid-19 transmission.

Different from previous research according to (Ahorsu et al., 2020), negative behavior from partners can affect each other's mental health, while support or positive behavior from partners can reduce emotional stress or improve mental health. Studies conducted (Ratih, 2021), among several factors why pregnant women do not get the Covid-19 vaccine are they have not received permission or support from their husband or family, they are worried about the health of both the mother and baby and there is even a fear of having the Covid-19 vaccine. This is in line with research (Yıldırım & Özkan, 2022), fear of the Covid-19 vaccine is caused by negative criticism expressed by family or friends. However, several studies have shown that family and friends can play a role in hesitancy in administering routine vaccines during pregnancy (Gencer, Özkan and Vardar, 2022).

### **Sociocultural Relationship with Covid-19 Vaccination in Pregnant Women.**

The sociocultural variable has a sig-p value = 0.481 or  $> \alpha$  value = 0.05, meaning that social culture is not significantly related to Covid-19 vaccination in pregnant women. According to (Adventus et al., 2019) public health culture shapes, regulates and influences the actions and activities of individuals in a social group in meeting various health needs, both in terms of disease prevention and self-healing. Cultural characteristics are directly and indirectly

related to acceptance and compliance with health promotion programs, understanding culture is very necessary to understand the behavior of that group (Dutta, 2007).

The current study shows that social support has a positive influence on pregnant women's opinions about the Covid-19 vaccine and encourages them to receive the vaccine (Gencer, Özkan and Vardar, 2022). Public trust in vaccination programs in the work they do for society, socio-culturally, politically and morally (Harrison & Wu, 2020). Several studies show that hesitancy towards the Covid-19 vaccine is driven by cultural, social, historical, political and individual factors such as emotions, values, risk perception, knowledge or beliefs (O.C. Ekwebelem, I. Yunusa, 2020).

According to the results of this research, a socio-cultural approach must be taken because handling an outbreak is not enough to involve medical aspects alone, such as the widespread transmission of the Covid-19 virus outbreak because many people still ignore health protocols so that the outbreak develops into a pandemic. The success of vaccination really depends on a socio-cultural approach that is collaborative and involves religious leaders or religious leaders as health agents in educating the public, especially pregnant women, about the dangers of Covid-19 and the effectiveness of the Covid-19 vaccine.

Based on the results of interviews with informants regarding obstacles in administering the Covid-19 vaccine to pregnant women, they stated that there were no obstacles in terms of religion or socio-culture, but they were still afraid of side effects when administering the Covid-19 vaccine.

Different from of the research (Zaid, Arundati Shinta, M. Fikri, 2021) that there is the influence of social and socio-cultural norms that can influence a person's interest in getting vaccinated against Covid-19. The government needs to take a cultural approach considering the socio-culturally diverse characteristics of society. The socio-cultural aspect is closely related to the spread of an outbreak or pandemic because of the cultural behavior of the community, a collaborative cultural approach and involving community leaders or religious leaders as health agents needs to be carried out to educate the public about the dangers of viruses and the effectiveness of vaccines (Farina, 2021).

### **Relationship between the Role of Health Workers and Covid-19 Vaccination for Pregnant Women**

The variable role of health workers has a sig-p value = 1 or  $> \alpha$  value = 0.05, meaning that the role of health workers is not significantly related to Covid-19 vaccination in pregnant women. Different from research results (Regazzi, 2021) by evaluating and analyzing the knowledge, attitudes and behavior of health workers towards the Covid-19 vaccine, it can have a positive influence on the Covid-19 vaccine considering the influence of the perception of health workers on the general public so that they can carry out Covid-19 vaccinations. This is in line with research (Wulandari Lenny, 2021) there is a relationship between health workers' perceptions of the Covid-19 vaccine.

Using the role of public health workers during the Covid-19 response is key in involving the community and strengthening capacity to limit the spread of

Covid-19, the role of health workers in preventing and controlling Covid-19 as well as psycho-social support to vulnerable populations, supporting the provision of basic health services and supports Covid-19 vaccination. Developing policies regarding Covid-19 will strengthen public health interventions (N Rise, 2021).

In carrying out their duties, health workers must comply with the quality of service, that is, they must be free to do things professionally to improve the level of health in accordance with the knowledge and skills they possess as well as good quality health equipment that meets standards. The availability of facilities, attitudes and behavior of health workers will support the formation of a person's behavior (Hamidah dan Syariffudin, 2019). Based of research Simanjuntak, 2022, vaccination provides a sense of security for pregnant women facing the COVID-19 pandemic (Simanjuntak & Simanjuntak, 2023).

According to the results of this research, the role of health workers in the Covid-19 vaccination program for pregnant women, both from a promotive and preventive perspective, is very necessary. Health workers must not only vaccinate pregnant women against Covid-19, but must also campaign for Covid-19 vaccination, apart from providing education and empowering the community in an effort to promote the adaptation of new habits and health protocols in optimizing Covid-19 vaccination targets.

Based on the results of interviews with informants regarding receiving information about the importance of the Covid-19 vaccine during pregnancy, they also stated that they received information from health workers during classes for pregnant women and the facilities where the Covid-19 vaccine was provided were in community health centers, schools and markets.

Based on the above, the role of health workers in achieving vaccination targets has been maximized, starting from campaigning for the Covid-19 vaccine in every class of pregnant women, access to facilities where the Covid-19 vaccine is easily accessible and adequate and health workers also collaborate across sectors. However, the target for the Covid-19 vaccine in pregnant women has not been achieved.

The results of interviews with informants regarding the extent of the success of the Covid-19 vaccine in pregnant women in the last 6 months only reached 53%, not yet reaching the government's target.

Based on the above, public health workers really need to be optimally involved in many promotive and preventive aspects of public health. Public health workers can innovate and create strategies to accelerate vaccination achievement at the Padang Tikar Community Health Center with the main focus being education and empowering the community with optimal quality health services.

## **CONCLUSION**

The research results showed that the variables that influence Covid-19 vaccination in pregnant women are: knowledge ( $p = 0.011 < \alpha = 0.05$ ), attitude ( $p = 0.002 < \alpha = 0.05$ ), husband's support ( $p = 0.005 < \alpha = 0.05$ ) and variables that do not influence are: social culture ( $p = 0.481 > \alpha = 0.05$ ), the role of health workers ( $p = 1 > \alpha = 0.05$ ). The variable that has the most dominant influence is attitude with OR = 10,482 (95% CI OR 1,364-80,535) meaning that pregnant

women who have an unsupportive attitude are more at risk of not getting vaccinated against Covid-19, 10,482 times compared to pregnant women who have a supportive attitude towards Covid vaccination. -19. In conclusion, it is hoped that health workers will campaign for Covid-19 vaccination by providing strengthened support so that they can increase positive attitudes among pregnant women.

Suggestions for research sites are that they hope to play a more active role in campaigning for the Covid-19 vaccine for pregnant women, especially for health workers and cadres, as well as fostering more cross-sectoral cooperation. Campaigning for the Covid-19 vaccine for pregnant women is not only done through counseling but it is better also through electronic media so that it can be accessed anytime and anywhere. So that it is easier for pregnant women to get information about the Covid-19 vaccine. Providing information to pregnant women about Covid-19 and the correct Covid-19 vaccine, strengthening support mechanisms will eliminate negative feelings of fear, guilt and regret, creating a sense of security about vaccines can increase positive attitudes in pregnant women so that the target of the Covid-19 vaccine in pregnant women can be achieved.

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