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Factors related to the Attitude of Pregnant Women in Covid 19 Vaccination

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ABSTRACT

Covid-19 vaccination during pregnancy does not cause significant vaccine-related side effects or side effects resulting or adverse outcomes of obstetrics, fetuses, or neonatal outcomes. Concerns have been raised about the potential spike in Covid-19 in pregnancy, secondary to the increasing number of Covid-19 in the community, the easing of social restrictions, and doubts about vaccination. The purpose of this study is to find out the factors related to the attitude of pregnant women in carrying out Covid-19 vaccination. This descriptive study uses a cross-sectional method to analyze the data. The participants in this study were 155 pregnant women with a gestational age over 13 weeks who were scheduled to receive the first jab of Covid-19 vaccine. A total of 155 pregnant women were included in this study's sample. Logistic regression was employed in the statistical analysis. The results showed that the factors related to the mother's attitude towards the Covid-19 vaccine, namely knowledge (OR: 58.393, p value 0.001, CI: 15,729-216.773). Advice for health workers, especially midwives to provide information about Covid-19 vaccination regarding Covid-19 vaccination to reduce the concern of pregnant women in carrying out covid 19 vaccinations.

Keywords: covid 19, pregnancy, vaccinations

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BACKGROUND

At the beginning of the SARS-CoV-2 pandemic in 2020, there was a lack of evidence about the risk of Covid-19 disease in pregnant women. It is now known that while pregnant women do not seem to have a greater risk of contracting SARS-CoV-2 there is a small risk of severe disease with Covid-19 disease, especially in the late trimester of pregnancy (Mullins et al., 2020) . Pregnant women do not seem to be more susceptible to SARS-CoV-2 infection than non-pregnant women, but they are at higher risk of developing severe Covid-19 disease (Stock et al., 2022)**.** Parents' decisions about childhood vaccinations have also been shown to begin in pregnancy, making it therefore useful to assess pregnant women's perspectives on the Covid-19 Vaccine for themselves and their children. Understanding women's views and acceptance of Covid-19 vaccination is also important to address given that more than 98% of pregnant women hospitalized with Covid-19 between February 1, 2021 and September 30, 2021 are not vaccinated (MBRRACE-UK Mothers and Babies : Reducing Risk Through Audits and Confidential Enquires Accross The-UK, 2021).

Theoretically, the Covid-19 vaccine is safe to use in pregnancy, as it does not contain attenuated live viruses, Concerns have been raised about the potential spike in Covid-19 in pregnancy, secondary to the increasing number of Covid-19 in the community, easing of social restrictions, and doubts about vaccination (Skirrow et al., 2022). Social media posts have women worried about false claims about the dangers of Covid-19 vaccination. Such messages spread quickly and add to the importance of retrieving data from pregnant women to build reliable information. Providing information, both retro and prospective data should be collected to reduce pregnant women's concerns about covid 19 vaccination. Although the admission of all covid 19 vaccinations is recorded, this process cannot record if the person is pregnant, whether this vaccination is related to the condition of the pregnancy or the result of pregnancy (Girling, 2021).

Despite the increased risk, and current consideration by the U.S. Food and Drug Administration (FDA) on whether to include pregnant women in clinical trials, pregnant women are not included in the initial Covid-19 vaccine trials. This randomized clinical trial reported the efficacy of up to 95% of the mRNA-based vaccine in preventing Covid-19. Recently the first vaccine trials involving pregnant women began (Pfizer–BioNTech, ClinicalTrials). The Covid-19 mRNA vaccine (Pfizer–BioNTech BNT162b2 and Moderna mRNA) currently used for mass vaccination does not consist of live vaccines, nor does it use adjuvants. In light of all of the above, the American College of Obstetrics and Gynecologists (ACOG) and the Society for Maternal-Fetal Medicine (SMFM) recommend that the Covid 19 vaccine should not be withheld for pregnant and lactating women (Rottenstreich et al., 2022).

Previous studies have shown that the COVID-19 vaccine induces immunogenicity in female pregnant women against SARS-CoV-2 infection, which is similar in non-pregnant women. In addition, some research suggests that some anti-SARS-CoV-2 immunoglobulins can be transferred to newborns through the placenta and breast milk, thus providing humoral immunity (Garg et al., 2021), (Wang et al., 2021). On the other hand, some studies have also reported that Covid-19 vaccination during pregnancy does not cause significant vaccine-related side effects or adverse outcomes or adverse outcomes of obstetrics, fetuses, or neonatal outcomes. The CDC confirms that the benefits of receiving the Covid-19 vaccine outweigh the known or potential risks of vaccination during pregnancy and advises people who are pregnant, nursing, trying to conceive, or may become pregnant in the future undergo Covid-19 vaccinations (Stock et al., 2022), (Hunter et al., 2021).

The results showed that the Covid-19 vaccine was effective in reducing the incidence of SARS-CoV-2 infection and Covid-19 related hospitalizations among pregnant women. No side effects of Covid-19 vaccination were found in pregnant women, fetuses, or newborns. Our

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results confirm the effectiveness and safety of Covid-19 vaccination for pregnant women. Our findings may serve as a reference for relevant policymakers to formulate targeted strategies to improve Covid-19 related vaccine policies for pregnant women. In addition, reducing doubts about the Covid-19 vaccine also helps to increase vaccination coverage and protect pregnant women from SARS-CoV infection towards the end of the pandemic (Ma et al., 2022).

Other studies show that the main reason pregnant women refuse Covid-19 vaccination during pregnancy is because they don't want to expose their fetuses to the dangerous side of possible effects and want to see more safety and effectiveness data among pregnant women. Another result found that slightly less than half of pregnant women did not want vaccinations because they were "concerned that vaccine approval would be rushed for political reasons" (Egloff et al., 2022). The purpose of this study is to find out the factors related to the attitude of pregnant women in carrying out covid 19 vaccinations.

METHODS

This study was conducted at the Kedungwuni II Health Center from July to December 2021. This descriptive study uses a cross-sectional method to analyze the data. The participants in this study were 155 pregnant women with a gestational age over 13 weeks who were scheduled to receive the first jab of Covid-19 vaccine. A total of 155 pregnant women were included in this study's sample. This study relied on primary data. The researchers used written questionnaire to obtain information and responses from the research subjects. To be more impartial, the researchers collected the data personally; once the respondents had finished the questionnaire, the researchers would assist them in clarifying each question. Multivariate analysis was employed in this study. Logistic regression was employed in the statistical analysis. This research was conducted after the research team obtained permission to pass the research ethics from the University of Muhammadiyah Semarang with certificate no. 579/KEPK-FKM/UNIMUS/2021.

RESULTS

Table 1. Characteristics frequency distribution of pregnant women respondents

Variable	Frecuency	Percentage (%)
Age		
20-35 Years	25	16,1
<20 Years and >35 Years	130	83,9
Level of education		
Elementary/Junior	86	55,5
High School/College	59	45,5
Gravida status		
Primigravida	34	21,9
Multigravida/grandemulti	116	74,8
ANC Frecuency		
Ireguler	79	51
Reguler	76	49
Knowledge		
Less	69	44,5
Good	86	55,5
Attitude		
Negative	61	39,4
Positive	94	60,6

Table 1 shows that most respondents (83.9%) are 20-35 years old, more than half (55.5%) are elementary/junior high school educated, most (74.8%) are

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multigravida/grandemult, more than half (51%) have iregular ANC screenings, more than half (55,5%) have good knowledge of covid 19 vaccinations, and more than half (60.6%) respondent have postife attitude of vaccinacion covid 19.

Table 2. The findings of logistic regression analysis show the expectant mothers education level, gravida status, ANC frequency, knowledge and attitude in Covid-19 vaccination

	OR	CI 95%		*p*
		Lower	Upper	
Level of education	0,435	0,138	1,371	0,155
Gravida Status	0,241	0,074	0,780	0,118
ANC Frecuency	21,245	6,365	70,908	0,001
Knowledge	58,393	15,729	216,773	0,001
N Observation =155				
-2 Log likehood = 94,688				
Nagelkerke R^2 = 70%				

DISCUSSION

The results showed that the factors related to the mother's attitude towards the Covid-19 vaccine, namely knowledge (OR: 58.393, p value 0.001, CI: 15,729-216.773) which means that pregnant women who have good knowledge of the Covid-19 vaccination have 58.393 times the probability of having an attitude who are positive for the Covid-19 vaccination. Pregnant women who perform antenatal care (ANC) services regularly during pregnancy currently have a good level of knowledge of Covid-19. To the best of our knowledge, this is also the first finding. A possible explanation is that in addition to routine obstetric care pregnant women who have follow-up ANC can get information about Covid-19 and advice about the spread of the pandemic, its multidimensional consequences, and possible prevention methods by health care providers (Ayele et al., 2021).

Knowledge in pregnant women about covid 19 vaccination is influenced by several things including education level, ANC frequency, and knowledge about covid 19 prevention.

The results of the Besho et al (2021) study, have a better knowledge of Covid-19 higher among women who have a secondary and above education history compared to those who attend under elementary school. The reason for this may be because educated women are more likely to be exposed to a variety of mass media and social media including access to the internet to get information about Covid-19. They are also more likely to understand the information they obtained. Covid-19 is higher among women who come from urban areas compared to pregnant women who come from rural areas. These findings are supported by findings from studies of low-income pregnant women of countries that found that coming from rural areas is associated with low knowledge in pregnant women (Besho et al., 2021).

Clear and consistent communication by government officials is critical to building public confidence in vaccine programs. This includes explaining how vaccines work, as well as how to develop them, from recruitment to regulatory approval based on safety and efficacy. Credible and culturally sound health communication is critical in influencing positive health behaviors as has been observed with respect to encouraging people to cooperate with Covid-19 control measures. This includes preparing the public and leaders of respected community, religious and fraternal organizations in various sectors of society and local communities, as well as the private sector, for mass vaccination programs with credible spokespeople, local engagement, accurate information and technological support. The results of this study point to clear and accurate communication to convince pregnant women about Covid-19 vaccine safety, especially considering the number of pregnant women hospitalized with Covid-19 (Skirrow et al., 2022).

The results of this study are in line with research that states that pregnant women's

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knowledge about covid 19 prevention is related to behavior in the prevention of covid 19, one of the prevention of covid 19 is by vaccinating covid 19 (Dewi et al., 2020). The study also showed that the frequency of ANC is closely related to attitudes towards pregnant women towards covid 19 vaccination (OR: 21,245, p value: 0.001, CI: 6,365-70,908), which shows pregnant women who do ANC regularly have a good attitude towards covid 19 vaccination in pregnant women. The frequency of this ANC is related to information obtained from health workers regarding covid 19 vaccination. Pregnant women who do ANC regularly, are more understanding and informed about their pregnancy. During pregnancy visits, health care providers offer pregnant women comprehensive information and ensure their good pregnancy health during the Covid-19 pandemic, including symptoms and signs, diagnosis, therapeutic options, access to direct and appropriate services, health protocols, and preventive care including getting Covid-19 vaccinations. Pregnant women who understand well the importance of vaccination prevention in pregnancy will increase the frequency of pregnancy visits and receive positive information about the importance of giving the Covid-19 vaccine (Aisyah, Risqi Dewi; Fitriyani, F; Pambudi, 2021).

Pregnant women who follow up an ANC in pregnancy currently have a good level of Covid-19 knowledge. To the best of our knowledge, this is also the first finding. A possible explanation is in addition to routine midwifery care pregnant women who have follow-up ANC can get information about Covid-19 and advice on pandemic infection, multidimensional consequences, and possible prevention by health care providers (Ayele et al., 2021). The results of the study have provided evidence that having a Covid-19 vaccination in pregnancy does not change perinatal outcomes. Clear communication to increase awareness among pregnant women and health professionals about vaccine safety is needed, in addition to strategies to address vaccine doubts. These strategies include post-vaccination surveillance to collect more data on pregnancy outcomes, especially after the first trimester of vaccination, and long-term baby follow-up (Blakeway et al., 2022). Covid-19 vaccination is the most promising way to control the spread of the global Covid-19 pandemic. It is important to protect our vulnerable populations from pregnant and lactating women while also prioritizing their involvement in clinical trials for vaccines and anti-viral therapies and vaccine delivery (Garg et al., 2021).

In addition, Covid-19 vaccination is beneficial during pregnancy. Pregnant women who are Covid-19 positive are more likely to require hospitalization, doctors are more likely to opt for early labor, and these newborns are more likely to be hospitalized as well in neonate units. This will be the reason why getting vaccinated during pregnancy is so important. Furthermore, health practitioners and professionals should offer information about the Covid-19 vaccine so that pregnant women do not feel anxious when visiting vaccination clinics (Aisyah et al., 2021).

CONCLUSION

The factors most related to pregnant women's attitudes towards covid 19 vaccination are knowledge about Covid-19 vaccination (OR: 58,393, p value 0.001, CI: 15,729-216,773). Advice for health workers, especially midwives to provide information about covid 19 vaccination regarding covid 19 vaccination to reduce the concern of pregnant women in carrying out covid 19 vaccinations.

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