

Article

Factors Affecting the Preparedness of Pregnant Women Facing COVID-19 Vaccination

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A B S T R A C T

The COVID-19 disease also affects children and pregnant women. The latter can pose a risk to two humans, namely the mother herself and the fetus she is carrying. Therefore, the vaccination program for pregnant women at risk must be implemented immediately. However, this program of course still faces obstacles so that research on the concerns of pregnant women in dealing with COVID-19 vaccination must be determined. This quantitative study used a correlation analytic design with a cross sectional study approach. It took place at the Dauh Puri Sub-Public Health Center, Denpasar. The sample was pregnant women in TM I and TM II and had not received the COVID-19 vaccine as many as 70 pregnant women. The sampling technique was non-probability sampling. Data were collected through a questionnaire. Data analysis used non-parametric analysis, namely Spearman Rho Correlation. The results show that there was a relationship between the level of knowledge and the readiness of pregnant women but there was no relationship between education and the number of pregnancies and the readiness. Therefore, the level of knowledge becomes the only factor that affects the readiness of COVID-19 vaccination in pregnant women.

I. INTRODUCTION

Coronavirus Disease 2019 (COVID-19) is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS CoV-2) (Health Ministry of RI, 2021). The World Health Organization (WHO) as of November 29, 2020 declared that there were 61,869,330 cases of infection with Coronavirus Disease 2019 (COVID-19) worldwide with the number of deaths reaching 1,448,896 people. The disease caused by the Novel Coronavirus is spread through direct contact with droplets of sputum from an infected person (through coughing and sneezing) or direct contact with surfaces contaminated with the virus. (Noviani amalia *et al.*, 2020).

COVID-19 infection can be highly contagious through the air from the respiratory tract and close contact, and can be passed from one person to another. The clinical manifestations of this disease vary from mild to severe (Guo & Yang, 2021). Pregnant women and neonates are two high-risk populations that suffer from disproportionate rates of morbidity and mortality. Cumulative data so far suggest that pregnant women are at a higher risk for serious morbidity from COVID-19, albeit more modestly than other pathogens, such as 2009 H1N1 influenza. This increased morbidity is accounted for in terms of the increased need for intensive care, mechanical ventilation and mortality among symptomatic pregnant women, as well as suggestions of increased preterm birth rates (Beigi *et al.*, 2021).

There has been an increase in cases of pregnant women with confirmed COVID-19 in a number of major cities in Indonesia in severe cases. Pregnant women have an increased risk of becoming severely infected with COVID-19, especially in those with certain medical conditions. Efforts are needed to provide COVID-19 vaccination for pregnant women as recommended by the National Immunization Expert Advisory Committee/ Komite Penasihat Ahli Imunisasi Nasional (ITAGI). (Kemenkes, 2021).

Vaccines are a promising strategy to fight the COVID-19 virus through primary prevention. As biological products, they contain antigens in the form of dead or alive microorganisms that are attenuated, still intact or parts thereof, or in the form of microorganism toxins that have been processed into toxoids or recombinant proteins, which are added with other substances. When given to a person, they will cause immunity. specifically active against certain diseases.

A multi-method study of women's views on the COVID-19 vaccine found that 81% of nonpregnant women were willing to receive the vaccine immediately, compared with only 62% of pregnant women having the most frequent doubts regarding safety issues. The concerns are mainly related to the long-term effects and about the speed at which vaccines are developed and tested (Blakeway *et al.*, 2021).

Reluctance to get vaccinated is a well-known phenomenon and a serious threat. It can hinder and be a limiting step in global efforts to control the current pandemic. Regarding to this, the unpreparedness of pregnant women in receiving vaccinations is influenced by the fear of harm to the fetus and the occurrence of side effects that can have a negative impact on the fetus. Their anxiety about the health of the fetus and their own health has a negative impact on their well-being.

Several studies have shown that vaccination in pregnancy is a safe and highly effective strategy that is not only good for pregnant women themselves but also beneficial for the fetus and newborn mediated through passive transplacental antibody transfer. Knowledge and awareness of pregnant women at risk, and complete information about knowledge of vaccines and related diseases that can be prevented in pregnancy can avoid doubts and increase vaccination readiness (Wang *et al.*, 2021). Various concerns felt by pregnant women when going to carry out COVID-19 vaccinations need to be investigated in-depth. Factors that affect the readiness of pregnant women to face COVID-19 vaccination including factors of knowledge, education, number of pregnancies are very crucial to raise awareness of pregnant women about the importance of COVID-19 vaccination.

I. METHODS

This quantitative study used a correlation analytic design with a cross sectional study approach. It took place at the Dauh Puri Sub-Public Health Center, Denpasar. The sample in this study was pregnant women with a gestational age of TM I and TM II and had not received the COVID-19 vaccine as many as 70 pregnant women. The sampling technique was non-probability sampling. Data were collected through a questionnaire. Data analysis used non-parametric analysis, namely Spearman Rho Correlation.

II. RESULT

The obtained results are presented as follows:

a. Respondent Characteristics

Table 1.1 Frequency distribution of respondent characteristics based on education, gestational age, number of pregnancies, occupation and age of pregnant women at the Dauh Puri Sub-Health Center.

Respondent Characteristics	F	(%)
Gestational Age		
Trimester 1	73	94.8
Trimester 2	4	5.2
Occupation		
Housewife	44	57.1
Self-employed	1	1.3
Private-sector	32	41.6
Age		
20-29	77	100.0

Based on Table 1.1, most of the respondents were in the first trimester of pregnancy as many as 73 (94.8%) with the majority of work being housewives at 44 (57.1%).

b. Table 1.2 Univariate Analysis

Respondent Characteristic	F	(%)
Education		
Middle School	4	5.2
High School	35	45.5
Vocational High School	28	36.4
College	10	13.0
Pregnancy status		
G1	68	88.3
G2	9	11.7
Knowledge		
Good	24	31.2
Sufficient	42	54.5
Bad	11	14.3

Based on Table 1.2, most of the education of pregnant women was high school as many as 35 (45.5%). The first pregnancy was 68 (88.3%) with sufficient knowledge of 42 (54.5%).

c. Bivariate Analysis

1. Bivariate analysis of the relationship between the level of knowledge and the readiness of pregnant women in facing the COVID-19 vaccination showed a p value of less than 0.001 (< 0.05), which means there was a relationship between the level of knowledge and the readiness of pregnant women.
2. Bivariate analysis of the relationship between education and the level of readiness of pregnant women in dealing with the COVID-19 vaccination showed a p value of less than 0.132 (> 0.05).

so that the HO was accepted, which means there was no relationship between education and the level of readiness of pregnant women.

3. Bivariate analysis between the number of pregnancies and the level of readiness of pregnant women to face the COVID-19 vaccination obtained a p value of 0.149 (> 0.05), which means that there was no relationship between the incidence of pregnancy and the level of readiness of pregnant women in facing COVID-19 vaccination.

III. DISCUSSION

Drever (in Slameto, 2015) suggests readiness is preparedness to respond or react. This willingness is generated from within an individual and is related to maturity because maturity means readiness to carry out skills.

In research, the COVID-19 vaccination readiness can be divided into two categories, namely ready and unprepared. Based on this recent study, the results indicated that the majority of the respondents were ready to carry out COVID-19 vaccination. Based on 77 respondents, there were 52 respondents (67.5%) in ready category and 25 respondents (32.5%) in not ready category.

A high level of knowledge of pregnant women will lead to readiness for COVID-19 vaccination. In addition, the level of knowledge can also increase pregnant women to respond and react to the COVID-19 vaccination. With information on vaccination programs, i.e., the understanding of vaccines and vaccinations, the benefits of vaccination, safety, and side effects and requirements for COVID-19 vaccination for pregnant women, it will increase the readiness for COVID-19 vaccination so that the risk of complications can be prevented or reduced to increase better health.

Based on the characteristics of education in pregnant women, high school education was more than other education as many as 35 respondents (45.5%). This shows that respondents with higher education have a good understanding of vaccines (Ardiningsih & Pasek, 2021), therefore an understanding of this program is very much needed. Mother's understanding or knowledge of vaccination is strongly influenced by her education level. The higher a person's education, the more critical a person is in thinking to find as much information as possible related to something that is her concern.

Based on the characteristics of the number of pregnancies, the first pregnancy was more than the second pregnancy (68 respondents; 88.3%). Gravida is the number of pregnancies a woman has ever had. This is related to experience so it is hoped that previous pregnancy experiences will contribute to the current pregnancy.

IV. CONCLUSION

It can be concluded that the factor that influences the readiness of pregnant women in facing the COVID-19 vaccination is the level of knowl

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