

The Relationship Between Knowledge and Regularity of Antenatal Care Visits During The Covid-19 Pandemic

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Abstract.

Antenatal care (ANC) purpose to obtaining a safe and positive pregnancy and childbirth. Covid-19 pandemic bring an impact on the health sector, including ANC visits. This study purpose to analyze the relationship between knowledge with regularity of ANC visits for pregnant women in the third trimester during the Covid-19 pandemic in the work area of UPTD Puskesmas Karang Rejo. This research is a correlative analytical study with cross-sectional approach. The population were all pregnant women in third trimesters who did ANC with samples 37 respondents. The sampling technique was consecutive sampling. Data analysis using Spearman Rho statistical test. The result of bivariate analysis was $p = 0,001$, and the coefficient value ($r = 0,744$) meaning there is a correlation between the knowledge and the regularity of ANC visit. Pregnant women are expected to always open mind to receiving the information that given by health workers to increase their knowledge about ANC visits so support and motivate to did ANC visit regularly.

Keywords: *Antenatal Care, Knowledge, Covid-19*

1. INTRODUCTION

The Novel Coronavirus (2019-nCoV) officially known as SARS-CoV-2 or COVID-19 was first reported in December 2019 as a group of acute respiratory diseases in Wuhan, Hubei Province, China. On January 30, 2020, the World Health Organization designated COVID-19 as a Public Health Emergency of International Concern. The increase in the number of COVID-19 cases is happening quite quickly and has spread between countries (1)

Knowledge about COVID-19 infection in relation to pregnancy and the fetus is still limited. Based on these limited data and several examples of cases in the treatment of previous Coronaviruses (SARS-CoV and MERS-CoV) and some cases of COVID-19, it is believed that pregnant women have a higher risk of serious illness, morbidity and mortality compared to the general population (2). The Obstetrics and Gynecology Association (POGI) has issued specific recommendations for the treatment of pregnant women, mothers in labor, postpartum mothers and breastfeeding mothers during the COVID-19 pandemic. Regarding pregnancy, one of the recommendations issued is to postpone pregnancy check-ups to health workers if there are no danger signs in pregnancy (3).

The maternal mortality rate (MMR) in Indonesia is still at 305 per 100,000 births. This figure has not fulfilled one of the targets for achieving the Sustainable Development Goals (SDGs), namely to reduce the MMR by 2030. For this reason, efforts are needed to prevent an increase in maternal and infant mortality. One of the efforts to prevent maternal death can be done through antenatal care. Antenatal care is the care of the mother and fetus during pregnancy. Antenatal services can provide various information and education related to pregnancy and childbirth to mothers from an early age. Antenatal check-ups that are less regular can cause harm to the mother and fetus, such as bleeding during pregnancy because the danger signs are not detected. (4).

Various policies and recommendations from related institutions in an effort to control the spread of COVID-19 nationally have not gone well and consistently due to a lack of public awareness and discipline

(5). Lack of knowledge about COVID-19 is also suspected to be the cause of the neglect of various government policies.

There are several factors that influence pregnant women in carrying out their pregnancy visits, including age as an internal factor and external factors such as knowledge, attitudes, socio-cultural and family support. Knowledge is a factor that makes it easier for individuals to do what they do. Mothers who will check their pregnancy will be facilitated if they know what the benefits and importance of pregnancy checks are (6,7). Attitude is one of the important factors and affects the degree of health. The response of pregnant women to antenatal care will affect the regularity of the mother in carrying out antenatal care. Mothers who have a positive attitude towards antenatal care will do more antenatal care than pregnant women who have a negative attitude. Behavior is also a factor that plays an important role in determining health status because the status of completeness of antenatal care is influenced by the behavior of mothers who visit health services. These three things are related to each other (8,9).

II. METHODS

This type of research is descriptive-analytic with a cross-sectional approach. Data will be collected through an anonymous web-based survey made up of closed questions with multiple choice answers. The survey has two parts:

- 1) Questions related to general demography, pregnancy health history, and socioeconomic factors.
- 2) 15 items questions to assess knowledge about ANC visits during the pandemic Covid-19 and regularity of ANC visits

The survey collects information on demography, socioeconomic situation, pregnancy health question. The survey consists of 15 questions, and it has the following structure: consent form, demographic and socioeconomic questions, pregnancy health questions, and the question about knowledge. Before filling out the questionnaire that was spread boldly using the google form. Respondents were given the option to provide personal contact information (name and email address).

The study was conducted on August, 2020 to September, 2020. The population in this study were all pregnant women in Karang Rejo Health Center. The number of respondents collected until the end of the study was 37 respondents.

Data will be kept anonymous and non-identifiable. The data were processed using the Statistical Package for Social Sciences (SPSS) program for Windows version 22.0 which was then analyzed using the chi-square test.

III. RESULT AND DISCUSSION

Respondents in this study were pregnant women in the third trimester who had met the inclusion criteria as many as 37 people. The distribution of the characteristics of the respondents presented in table 1 shows that of the 37 respondents, most of the respondents had secondary education, namely 20 people. Most of the respondents work as many as 20 people and the parity of the most respondents is multigravida as many as 25 people. The following is the distribution of respondents' characteristics which are presented in the table below :

Distribution of Respondents Based on Characteristics		
Characteristics	Frequency (f)	Presentation (%)
Education		
Base	7	18.9
Intermediate	20	54.1
Tall	10	27.0
Total	37	100
Profession		
Working	20	54.1
Housewife	17	45.9

Total	37	100
Parity		
Primigravida	12	32.4
multigravida	25	67.6
Total	37	100

Analisis Univariat

The description of the knowledge of third trimester pregnant women about ANC visits during the Covid-19 Pandemic period based on the results of data processing and analysis shows that the knowledge of third trimester pregnant women in the Karang Rejo Health Center working area about ANC visits during the Covid-19 pandemic is 20 people with good knowledge, 15 people are knowledgeable enough and 2 people are not knowledgeable enough. Knowledge of third trimester pregnant women during the Covid-19 Pandemic is presented in table 2 below :

No	Knowledge about ANC Visits during the Covid-19 Pandemic	Total	
		f	%
1	Baik	20	54.1
2	Cukup	15	40.5
3	Kurang	2	5.40
	Total	37	100

The results of the analysis of the distribution of knowledge of pregnant women in the third trimester about ANC visits during the Covid-19 pandemic according to the indicators for each question item on the questionnaire showed as many as 34 pregnant women understood the meaning of ANC visits, 20 people understood the purpose of ANC. Indicators regarding the implementation of ANC during pregnancy were 24 respondents with good knowledge. The indicators regarding health protocols in the implementation of ANC during the Covid-19 pandemic showed as many as 21 people with good knowledge, but on the ANC mechanism and visits according to standards during the Covid-19 pandemic, only 14 respondents had good knowledge. The following is the distribution of respondents' knowledge based on the questionnaire, which is presented in the table below :

No	Indikator Pengetahuan	Baik		Cukup		Kurang		Total	
		f	%	f	%	f	%	f	%
1	Definition of ANC visit	34	91.8	3	8.20	0	0	37	100
2	ANC's goal	20	54.0	11	29.7	6	16.3	37	100
3	Implementation of ANC during pregnancy	24	64.7	8	21.7	5	13.6	37	100
4	Health protocols in the implementation of ANC during the Covid-19 pandemic	14	37.8	16	43.2	7	18.9	37	100
5	Mechanism for implementing ANC and ANC visits according to standards during the Covid-19 pandemic	21	56.7	11	29.7	5	13.5	37	100

Based on the results of data processing and analysis presented in table 5 below, it shows that of the 37 respondents studied, most of them made ANC visits during the Covid-19 pandemic on a regular basis

according to standards, namely 22 respondents and respondents who did not regularly make ANC visits, namely as many as 22 respondents. 15 respondents.

Regularity of ANC Visits during the Covid-19 Pandemic

No	Regularity of ANC Visits during the Covid-19 Pandemic	Total	
		f	%
1	Regular	22	59.4
2	Irregular	15	40.6
Total		37	100

Bivariate Analysis

Based on the bivariate analysis of statistical tests using the Spearman rank correlation, which is presented in table 5 below, it shows that the significance value is 0.001 which is smaller than 0.05 which means H_0 is rejected and H_a is accepted which means there is a significant relationship between knowledge about ANC visits and regularity. ANC visit for third trimester pregnant women during the Covid-19 pandemic.

The correlation coefficient value which indicates the level of strength or relationship between knowledge about ANC visits and the regularity of maternal ANC visits was obtained at 0.744, which means the relationship is strong. The correlation coefficient on the research variables is positive, so that the relationship between the two variables is unidirectional (type of unidirectional relationship) thus it can be interpreted that the better the level of knowledge about ANC visits, the more regular ANC visits are carried out.

Relationship of Knowledge About ANC Visits with Regularity of ANC Visits for Third Trimester Pregnant Women during the Covid-19 Pandemic

Regularity of Visits	Knowledge						Total	Sig. (2-tailed)	r
	Baik		Cukup		Kurang				
	f	%	f	%	f	%			
Regular	19	51.4	5	13.5	0	0.00	24	0.001	0.744
Irregular	1	2.70	10	27.03	2	5.40	13		

1. Knowledge of ANC Visits for Third Trimester Pregnant Women during the Covid-19 Pandemic in the Work Area of Karang Rejo Health Center

Based on the results of the study, it was found that most of the respondents had good knowledge about ANC visits during the Covid-19 pandemic, namely 20 respondents (54.1%). Based on the results of the analysis of the characteristics of the respondents adjusted to the theoretical study above, there are several factors that affect the regularity of ANC visits during the Covid-19 Pandemic :

a. Education

In the results of this study, respondents' education is dominated by respondents with secondary education to higher education and is comparable to respondents who have good knowledge so that it can indirectly be seen that the higher the education level of pregnant women, the better their ability to understand and absorb information or knowledge.

b. Profession

Working mothers will have less time to check their pregnancy which indirectly reduces the opportunity to increase their insight and knowledge because they spend more time working. Meanwhile, mothers who do not work will have more time to check their pregnancy so that they get more information about the benefits of ANC and ANC standards which directly increase their knowledge. This is different from the results of this study, in this study, the number of respondents who worked was comparable to respondents who had good knowledge. The Covid-19 pandemic, which has contributed to various sectors of life, is an option that provides equal opportunities for pregnant women who are working and not working in increasing their knowledge about ANC visits, both through ANC examinations and telemedicine media. The work from

home policy set in several work sectors related to one of the government policies, namely social distancing efforts, is one of the reasons for the different effects of work on the knowledge of pregnant women.

c. Parity

Multigravida respondents are comparable to respondents who are well informed. Parity shows the number of pregnancies that have been experienced and provides the mother's experience in dealing with pregnancy. Experience is a process in obtaining the truth of knowledge by repeating the knowledge that has been obtained in solving problems encountered in the past and can be used in an effort to gain knowledge. This is supported by Priyanti's research (2020) which states that parity provides mother's experience in dealing with previous pregnancies so that it can indirectly affect her knowledge of ANC visits. The results of this study indicate that pregnant women who have good knowledge about ANC visits are higher than the results of Ahmalia's research (2018) at the Lubuk Alung Health Center which shows only 43.1% or as many as 22 respondents from 51 respondents have good knowledge. Mamalango's research (2019) at the Ranotana Weru Health Center in Manado City showed that mothers who had good knowledge were 59.3% and in 43 studies Toar (2020) found that 60.5% of pregnant women had good knowledge, so the results of this study indicate the percentage of pregnant women who are knowledgeable. either lower than the percentage of the two studies. The researcher assumed that the difference in the results of the study regarding the knowledge of third trimester pregnant women about ANC visits in this study with other studies was due to differences in the characteristics of the respondents, the place of study and the time of the study. Characteristics of respondents as described above. The time of the study was when the Covid-19 pandemic conditions that had been determined by WHO and became a national disaster determined by the government had an impact on the health service sector. Government policy in accordance with the Regulation of the Minister of Health of the Republic of Indonesia Number 9 of 2020 concerning Guidelines for Large-Scale Social Restrictions in the context of Accelerating the Handling of Corona Virus Disease 2019 (Covid-19) which imposes restrictions on the public service sector to the health sector and is supported by the ANC Service Guide during the Pandemic Period Covid-19 contributes to health services. Regardless of the number of visits according to the standards in the guidelines, one of them states that if pregnant women have no complaints, they are asked to apply the contents of the MCH handbook at home and immediately go to health care facilities if there are complaints or danger signs. Indirectly this has an impact on health education which affects the knowledge of pregnant women. During the pandemic, information related to Covid-19 which is not necessarily true is spread in the community with the diverse understanding of the community towards Covid-19 and the level of public anxiety including pregnant women is still quite high on health services also contributes to the knowledge of pregnant women.

Regularity of ANC Visits for Third Trimester Pregnant Women during the Covid-19 Pandemic in the Work Area of Karang Rejo Health Center

Based on the results of the study found that 24 people (64.9%) of respondents made regular ANC visits. The regularity of ANC visits is the suitability of the number of antenatal care visits with the minimum number of standards set. This study also showed that as many as 13 people (35.1%) of respondents did not regularly make ANC visits according to the minimum standards in each trimester. This means that the minimum number of ANC visits based on gestational age or trimester has not been carried out by pregnant women. The regularity of ANC visits in normal pregnancies according to the standards of the Indonesian Ministry of Health during the Covid-19 pandemic is six times with details at least twice in the first trimester, once in the second trimester, and three times in the third trimester.

The update that distinguishes this standard from the pre-pandemic standard is followed by several policies including appointments/tele-registration for ANC services and screening of symptoms/contact history through communication media as well as the application of health protocols at every ANC visit (1). Appointment/tele-registration is registration to a health care facility to perform ANC, postpartum, and newborn visits through communication media (telephone/SMS/WA) or online. Based on this, apart from factors such as respondent characteristics, it is these policy factors that contribute indirectly to the regularity of ANC visits. This study uses a cross sectional method with limited research time, to evaluate the regularity

of respondents in ANC visits in the third trimester according to the Indonesian Ministry of Health (2020b) standards set at least twice with the consideration that pregnant women still have the opportunity for ANC visits at 36 weeks gestation until before giving birth. According to Inayah's research (2020), pregnant women who have higher education will have their pregnancy checked regularly because they have a great curiosity that encourages pregnant women to find out information about their pregnancy and ask for complaints they feel during pregnancy. This is in line with the results of this study which shows that the number of respondents who perform ANC regularly is comparable to respondents with secondary education to higher education..

Other respondent characteristics that affect the regularity of ANC visits are occupation and parity. According to Ariestanti's research (2020) there is no relationship between work and regularity in ANC. This is because working mothers have a high awareness of carrying out pregnancy checks by taking the time and making appointments with health care facilities during the Covid-19 pandemic so that working pregnant women can still carry out regular ANC checks. This study shows that the regularity of ANC visits by research respondents is comparable to respondents who work. This can happen because of one of the policy contributions during the current Covid-19 pandemic. Restrictions on public services to health services, including postponement of classes for pregnant women can contribute to primigravida pregnant women so that because pregnancy is a new experience, it affects the regularity of their visits during pregnancy.

Antenatal check-ups or ANC that are not carried out regularly will have an impact on the process of pregnancy, childbirth and the puerperium. ANC visits if they are not regular, they cannot do early detection of complications and complications, cannot carry out initial management and prepare for referrals if needed, cannot prepare for safe delivery and pregnant women, husbands and families cannot know and prepare anticipatory planning and preparation early to make referrals if there are complications.

2. Relationship of Knowledge About ANC Visits with Regularity of ANC Visits for Third Trimester Pregnant Women during the Covid-19 Pandemic in the Work Area of Karang Rejo Health Center

The results showed that the respondents who made regular ANC visits were 24 people (89.5%) who had good knowledge 19 people (51.4%) and 5 people (13.5%) who had sufficient knowledge. Respondents who did not regularly make ANC visits were 13 people (35.1%) who had good knowledge, 1 person (2.7%), had sufficient knowledge 10 people (27.03) and 2 people (5.40%) who had less knowledge. Based on this distribution, it can be concluded that the respondents in this case are pregnant women in the third trimester who have good knowledge on regular ANC visits compared to third trimester pregnant women who have sufficient knowledge and more in the category of irregular ANC visits. The results of the analysis of this study found that there was a significant relationship between knowledge about ANC visits and the regularity of ANC visits for pregnant women in the third trimester during the Covid-19 pandemic.

In this study, almost all respondents knew the purpose and benefits of ANC visits and understood the health protocols during ANC visits during the Covid-19 pandemic. Researchers assume that other factors that cause a lack of knowledge about the minimum number of ANC visits according to standards during the Covid-19 pandemic are the characteristics of the respondents and the time of the study as described above. The results of statistical tests in this study indicate the acquisition of a positive correlation coefficient, so that the relationship between the two variables is unidirectional which means that the better the level of knowledge about ANC visits, the more regular ANC visits.

Policies related to the current pandemic period cannot be ruled out as a risk factor that affects the knowledge and regularity of ANC visits. One of the contents of the ANC service guidelines for midwives during the Covid19 pandemic is the postponement of classes for pregnant women or online as well as pregnancy consultations, and counseling, information and education can be done online or known as telemedicine. Based on this, it is important to know the relationship between knowledge and the regularity of ANC visits so that it can be taken into consideration to find new solutions for all related aspects to still be able to increase the knowledge of pregnant women about standard ANC visits during the Covid-19 pandemic.

IV. CONCLUSION

There is a significant or significant relationship between knowledge about ANC visits and the regularity of ANC visits for third trimester pregnant women during the Covid-19 pandemic in the Karang Rejo Community Health Center work area. The statistical test results show a significance of $p = 0.001$ and the value of the correlation coefficient or the value of $r = 0.744$, so the relationship is strong. The correlation coefficient (r value) shows a positive value, meaning that the relationship between knowledge about ANC visits and the regularity of ANC visits is unidirectional, i.e. the better the level of knowledge about ANC visits, the more regular ANC visits.

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