# FACTORS RELATED TO ANTENATAL CARE VISITS DURING THE COVID-19 PANDEMIC

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#### Abstract

Infant and maternal mortality are still an obstacle that is highlighted in the world of health in the world. The mortality rate for mothers and babies has increased in the era of the COVID-19 pandemic. The number of cases of a maternal death increased from 125 in 2019 which increased the number of cases to 129 in 2020 in Riau province. In one case, referring to infant and maternal mortality rates in Indonesia, the Ministry of Health handled it through antenatal care (ANC) activities. With Antenatal Care, pregnant women are able to deal with childbirth, postpartum, exclusive breastfeeding, and the return of reproductive health because Antenatal Care aims to optimally improve the physical and mental health of a pregnant woman. The purpose of this research is to find out what are the factors associated with antenatal care (ANC) visits during the COVID-19 pandemic. This type of research is quantitative analytic. In this research using a design that is Cross Sectional. The population of this study were pregnant women in the Working Area of the Garuda Health Center, with a sample of 155 people. In this research, univariate, bivariate and multivariate analysis designs were used. The results of the analysis found that the majority of pregnant women, as many as 60 people (62.5%) did not make routine ANC visits and there was a significant correlation between husband support, technological factors. through ANC visits during the Covid -19 pandemic with a p.value <0.05. The dominant factor that affects a midwife's performance is the variable support from the husband. The results showed that compared to mothers who received support from their husbands, mothers who did not receive any support from their husbands had the risk of not having 16 ANC visits. It is hoped that the role of the Puskesmas will result in technological applications to facilitate access to ANC visits and education for husbands.

Keywords: COVID-19, Antenatal Care, Pregnant Women.

#### 1. INTRODUCTION

A research process on a Maternal Mortality Rate (MMR) is one way to measure the success of maternal health initiatives. MMR can be reduced to 95% or 70 maternal deaths per 100,000 live births in 2030 through a Sustainable Development (SDG) program [1]. The MMR indicator (per hundred thousand live births) has been declining since 1991, from 390 to 230 in 2020, a decrease of 1.80% every year, according to the data.

An MDGS target in 2015 of 102 and SDGs in 2030 of less than 70 per 100,000 live births has not been met by this reduction (Center for Budget Studies of the DPR RI Expertise Body). Pregnant women die from complications that arise during pregnancy and childbirth. The majority of problems can be avoided and treated with regular prenatal care.

Talking about the physical health and mental health of a pregnant mother, it can be improved significantly through antenatal care, namely pregnancy checks. This aims to make it easier for pregnant women to manage pregnancy, childbirth, exclusive breastfeeding and restoration of reproductive health. Examination of pregnant women is an efficient way to reduce the Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR) [2].

During the Covid-19 pandemic in Indonesia, ANC visits decreased. In the period from January to April 2020, antenatal care (ANC) data has decreased. K1 coverage was 76,878 in January and 59,326 in April. K4 had 57,166 viewers in January, but only 50,767 in April [3]

Antenatal care aims to reduce mortality and morbidity rates in pregnant, childbirth and postpartum women. Pregnancy problems can be avoided by carrying out routine pregnancy checks in accordance with applicable norms. Prenatal checks should be carried out at least six times, including two checks in the first trimester, one check in the second trimester, and three checks in the third trimester [4].

Regular prenatal check-ups can increase the likelihood of additional problems occurring and resulting in the death of the mother and child. To help the health of pregnant women and to prevent and identify problems related to pregnancy, prenatal care is very important [5].

According to research on the continuity of mother and child services in health facilities, community concerns, physical limitations, and anxiety of health workers are the main causes of the cessation of health services.

According to UNICEF 2020, the most common reason for discontinuing health services is public concern, reaching 64%. Age, knowledge, education, occupation, socioeconomic status, technical considerations, and husband's support are some of the factors which affect antenatal care.

According to Cahyati's research in 2021, there is a relationship between technological variables and the compliance of pregnant women in carrying out complete antenatal care (ANC) visits in the Jember Kidul Community Health Center Working Area, Jember Regency, which has a p value of 0.001 (0.05) for Spearman statistics. rank. test.

A statistical test result was obtained showing that the p value obtained was 0.017 < alpha 0.05, meaning that there was a significant relationship between husband's support and ANC visits [6]. The situation around prenatal care visits has changed as a result of the Covid-19 crisis.

Therefore, researchers want to conduct further research on variables related to antenatal care visits during the Covid-19 pandemic in the hope that it can provide new insights for health workers and the research conclusions can help them in planning for mothers, families and Mother. local communities to create a safe environment.

As a way to help mothers carry out their pregnancies safely during the ongoing co-19 pandemic, making everything healthier and encouraging. The results of this research can also help in early detection of health problems related to pregnancy, so as to minimize pregnancy complications and reduce maternal mortality.

## 2. MATERIALS AND METHODS

This research method is an analytic cross-sectional design, which is a data collection design which is carried out at one time and measurements are only carried out once without repetition as well. further observations. In this analytic cross-sectional study, factors that can be operationalized as independent variables associated with antenatal care visits are the dependent variables, which are found and collected at the same time.

## 3. RESULT AND DISCUSSION

#### 3.1. Result

Bivariate analysis aims to understand what factors have a relationship with ANC visits during the Covid-19 Pandemic at the Garuda Pekanbaru Health Center using a chi-square test where  $\alpha = 0.05$ , CI; 95% and OR > 1/OR < 1.

|                              |               | V    | isit A  | NC   |       |         |                      |  |
|------------------------------|---------------|------|---------|------|-------|---------|----------------------|--|
| Variable                     | Not a routine |      | Routine |      | Total | p Value | OR (95 % CI)         |  |
|                              | Ν             | %    | n       | %    | n (%) |         |                      |  |
| Age                          |               |      |         |      |       |         |                      |  |
| Risked (<20 and<br>>35 year) | 10            | 40   | 15      | 60   | 25    | 0,014   | 0,028 (0,108-0,723)  |  |
| Heigh (20-35<br>year)        | 50            | 70,4 | 21      | 29,6 | 71    | 0,014   |                      |  |
| Education                    |               |      |         |      |       |         |                      |  |
| Low (SD, SMP)                | 15            | 93,8 | 1       | 6,2  | 16    | 0,011   | 11,667 (1,469-       |  |
| High (SMA, PT)               | 45            | 56,2 | 35      | 43,8 | 80    | 0,011   | 92,630)              |  |
| Job                          |               |      |         |      |       |         |                      |  |
| Jobless                      | 26            | 86,7 | 4       | 13,3 | 30    | 0,002   | 6.118 (1,921-19,477) |  |
| Work                         | 34            | 51,5 | 32      | 48,5 | 66    | 0,002   |                      |  |
| Economic factors             |               |      |         |      |       |         |                      |  |
| Low                          | 31            | 70,5 | 13      | 29,5 | 44    | 0,204   | 1,891                |  |
| High                         | 29            | 55,8 | 23      | 44,2 | 52    | 0,204   | (0,810-4,415)        |  |
| Knowledge                    |               |      |         |      |       |         |                      |  |
| Low                          | 37            | 88.1 | 5       | 11.9 | 42    | 0,0001  | 9,974 (3,392-29,324) |  |
| High                         | 23            | 42.6 | 31      | 57.4 | 54    | 0,0001  |                      |  |
| Technology factor            |               |      |         |      |       |         |                      |  |
| No                           | 46            | 80,7 | 11      | 19,3 | 57    | 0,0001  | 7,468 (2,953-18,885) |  |
| Yes                          | 14            | 35,9 | 25      | 64,1 | 39    | 0,0001  |                      |  |
| Support of husband           |               |      |         |      |       |         |                      |  |
| Any                          | 45            | 83,3 | 9       | 16,7 | 54    | 0,0001  | 9,000 (3,466-23,370) |  |
| Nothing                      | 15            | 35,7 | 27      | 64,3 | 42    | 0,0001  |                      |  |

 Table 1: Summary of Bivariate Analysis Results

Table 1 refers to the 7 independent variables, there are 6 independent variables that are significantly related to visits. ANC, namely the variables of age, education, employment, knowledge, technological factors and husband's support. For independent factors that are not significantly related, namely economic factor variables.

| No | Variable           | n voluo  | OR     | (95 % CI) |         |
|----|--------------------|----------|--------|-----------|---------|
| NO | Valiable           | p value. | UK     | Lower     | Upper   |
| 1. | Age                | 0,076    | 3,542  | 0,059     | 0,742   |
| 2. | Job                | 0,123    | 3,843  | 0,693     | 21,312  |
| 3. | Economy factor     | 0,432    | 0,614  | 0,182     | 2,072   |
| 4. | Knowledge          | 0,350    | 2,194  | 0,423     | 11,388  |
| 5. | Technology factor  | 0,040    | 3,269  | 1,053     | 10,147  |
| 6. | Support of husband | 0,011    | 16,021 | 1,886     | 136,076 |

**Tabel 2: Final Multivariate Model** 

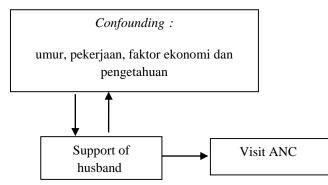
In table 2. From a multivariate analysis carried out with 6 times modeling, it turns out that ANC visits are significantly related to the variables of technological factors and husband's support, mothers who do not access technological factors have 3 times the risk of not making ANC visits during the Covid 19 pandemic compared to mothers who

access technology factors (C.I 95%: OR = 1.053-10.147). In the husband's support variable, it is found that a mother who does not receive support from her husband is at risk of not having an ANC visit 16 times compared to a mother who receives support from her husband (C.I 95%: OR = 1.886-136.076), while the confounding variable is the variable. age, occupation, economic factors and knowledge of ANC visit variables during the Covid 19 pandemic.

#### 3.2. Discussion

### Husband's support

Mothers who do not receive support from their husbands are at risk of not making ANC visits 16 times compared to receiving support from their husbands (C.I 95%: OR = 1.886-136.076). The decision can be accepted if the p value <  $\alpha$  (0.05) [7], [8], [9], meaning that there is a relationship between husband's support and ANC visits in during the Covid 19 pandemic. This means that it was found to have 4 confounding variables, namely age, employment, economic factors and knowledge as shown in Figure 1 below:



# Figure 1: The influence of husband's support variables and confounding with age, employment, knowledge factors and economic factors

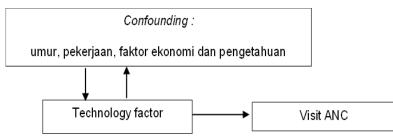
Pregnant women experience anxiety when scheduling ANC appointments due to the prevalence of Covid-19. One risk category that is particularly susceptible to contracting Covid-19 is pregnant women. Husband's support influences compliance with pregnancy checks in one way. In other words, having a supportive partner can help overcome anxiety. Due to the existence of a family support network, pregnant women tend to prioritize the health of themselves and their fetus by attending ANC appointments [10].

According to researchers during ANC visits during the Covid 19 era, husband's support is very important. If the husband is supportive, even though the mother is working and the mother's age is at risk, economic limitations and has low knowledge, it will influence the mother to make ANC visits. Researchers recommend that education be given to husbands regarding the importance of ANC visits.

## **Technology Factors**

In this study, it was found that mothers who did not access technological factors had 3 times the risk of not visiting ANC during the Covid 19 pandemic compared to mothers who did access technological factors (C.I 95%: OR = 1.053-10.147). p value <  $\alpha$  (0.05) which means that there is a correlation between a technological factor and ANC visits during the Covid 19 pandemic [11].

Then 4 confounding variables were obtained, namely age, employment, economic factors and knowledge such as seen in Figure 2 below:



# Figure 2: The influence of technological factors and confounding variables with age, employment, knowledge factors and economic factors

Many people will need technology such as the internet more because it is considered safer during the COVID-19 epidemic than going directly to a medical facility. Mothers who are exposed to technology, such as facilities, infrastructure, and easy access to health facilities, are more likely to comply with prenatal care appointments [11].

According to researchers, technology is very important for mothers to access and if it is accessible, even though mothers are working and the mother's age is at risk, experiencing economic limitations and having low knowledge will greatly influence mothers to make ANC visits during the pandemic. This is because technology makes it easier and speeds up activities, especially in monitoring the health of pregnant women without waiting long to get ANC services. Researchers recommend the importance of education given to pregnant women regarding the use of technology so that they can easily visit ANC during the Covid-19 pandemic.

# 4. CONCLUSION

Based on the description in the research results chapter and discussion chapter, the researcher hereby draws the following conclusions:

- 1) The majority of ANC visits were not routinely carried out by mothers as many as 60 people (62.5%)
- 2) There is a significant influence between husband's support and ANC visits during the Covid-19 pandemic.
- 3) There was a significant influence between a technological factor and ANC visits during the Covid-19 pandemic.
- 4) There was no significant effect on age, education, employment, economic factors, knowledge with ANC visits during the Covid-19 pandemic.
- 5) The dominant factor influencing ANC visits is the husband's support variable. The results showed that mothers who did not receive support from their husbands had a risk of not having ANC visits 16 times compared to mothers who received support from their husbands.

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#### References

- 1) WHO, "Angka Kematian Ibu dan Angka Kematian Bayi," World Bank, 2018.
- 2) WHO, "Maternal Mortality Key Fact," 2019.
- 3) I.A. a. M. S. D. Riyanto, "Pregnant Women's Motivation in Conducting Antenatal Care During The Covid-19 Pandemic," *Menara Journal of Health Science*, vol. 2, no. 1, pp. 88-97., 2023.
- 4) K. RI, Buku Kesehatan Ibu dan Anak, Jakarta, 2020.
- 5) D. Onyeajam, "Antenatal Care Satisfaction in a De e Satisfaction in a Developing Countreloping Country: A Cr y: A Cross Sectional Study From Nigeria," *University of South Carolina*, 2018.
- 6) F. Handayani, "Faktor-Faktor Yang Berhubungan Dengan Kunjungan Antenatal Care (Anc) Di Desa Muara Mahat Wilayah Kerja Puseksmas Tapung I," *Jurnal Doppler ,* vol. 1, no. 2, 2017.
- 7) A. N. H. a. S. B. P. I. Pratiwi, "Hubungan Umur, Dukungan Suami, Pengetahuan, Dan Pekerjaan Ibu Terhadap Kepatuhan Antenatalcare Dimasa Pandemik Covid 19 Di Praktek Mandiri Bidan Wiwi Herawati S. St Bogor," *Jurnal Ilmiah Kesehatan BPI*, vol. 5, no. 1, 2021.
- 8) M. D. a. I. M. Klevina, "Dukungan Emosional Suami dengan Ketepatan Jadwal Kunjungan Antenatal Care (ANC) pada Ibu Hamil Trimester III Selama Pandemi COVID-19 di Wilayah Kerja Puskesmas Pilangkenceng Kabupaten Madiun," *urnal Ilmu Kebidanan dan Kesehatan (Journal of Midwifery Science and Health)*, vol. 2, no. 21-24, p. 13, 2022.
- 9) A. D. D. P. S. a. D. S. .. Sulistyowati, "Hubungan Dukungan Suami dengan Kepatuhan Pemeriksaan ANC pada Ibu Hamil di Masa Pandemi COVID-19," *MOTORIK Jurnal Ilmu Kesehatan*, vol. 2, no. 74-83, p. 16, 2021.
- 10) T. H. P. a. F. F. Ike, "Hubungan Dukungan Keluarga Dengan Tingkat Kecemasan Ibu Hamil Dalam Melakukan Kunjungan Antenatal Care (ANC) Pada Masa Pandemi Covid-19 Di Kelurahan Sagatani," *ProNers*, vol. 6, no. 1, 2021.
- 11) L. D., Cahyanti, "Faktor-faktor yang berhubungan dengan kunjungan antenatal care (anc) ibu hamil di era pandemi covid-19 di wilayah kerja puskesmas Jember Kidul Kabupaten Jember tahun 2021," *Universitas Islam Negeri Maulana Malik Ibrahim,* 2021.