

The Relationship Between Antenatal Care Attendance Compliance and Preeclampsia in Pregnant Women in the Working Area of the Majasem Community Health Center in Cirebon City

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ABSTRACT

Background & Objective: Antenatal care is a health service provided to pregnant women by health workers, involving the monitoring of the physical and psychological health of pregnant women and the growth and development of the fetus in accordance with established procedures and schedules. Regular ANC can detect abnormalities early, particularly those related to preeclampsia, thereby preventing mild preeclampsia, severe preeclampsia, and eclampsia and enabling appropriate treatment. Preeclampsia is one of the conditions experienced and caused during pregnancy. This study aims to determine the relationship between compliance with antenatal care visits and preeclampsia in pregnant women in the Majasem Public Health Center (Puskesmas) area of Cirebon City. **Method:** This study is a quantitative descriptive correlation study with a retrospective approach. The sample was selected using total sampling, with a total of 33 respondents. The instrument used was a data summary sheet. Data analysis was performed using the chi-square test. The study was conducted in the Majasem Public Health Center area in Cirebon City from May to June 2022. **Result:** The research results showed that most respondents did not comply with antenatal care visits according to the specified distribution or requirements, with 12 (26.4%) compliant and 21 (63.6%) non-compliant, and 26 (78.8%) with mild preeclampsia and 7 (21.2%) with severe preeclampsia. The chi-square test yielded a p-value of $0.687 > \alpha = 0.05$, so H_a was accepted, meaning there was no association between compliance with antenatal care visits and preeclampsia among pregnant women in the service area of the Majasem Health Center in

Cirebon City. **Conclusion:** There is no association between compliance with antenatal care visits and preeclampsia among pregnant women in the service area of the Majasem Health Center in Cirebon City.

Introduction

Antenatal care is a service provided to pregnant women in accordance with standards set by health workers. The frequency of antenatal care services can be seen from the compliance of mothers in attending their first antenatal visit (K1) and fourth antenatal visit (K4) regularly during pregnancy (Indonesian Ministry of Health, 2015).

According to the World Health Organization, 99% of maternal deaths occur in developing countries, with approximately 830 women dying each day globally due to complications from pregnancy and childbirth, resulting in a maternal mortality rate (MMR) of 216 per 100,000. This maternal mortality rate is still considered quite high compared to the target set in the Sustainable Development Goals, which aims for a rate of 70 per 100,000 live births. (WHO, 2015).

According to the World Health Organization (WHO), one of the causes of maternal and fetal morbidity and mortality is severe preeclampsia (SPE), with an incidence rate ranging from 0.51% to 38.4%. In developed countries, the incidence of severe preeclampsia ranges from 6% to 7%, and eclampsia from 0.1% to 0.7%. Meanwhile, the maternal mortality rate caused by severe preeclampsia and eclampsia in developing countries remains high (Betty & Yanti, 2011).

In Indonesia, 30–40% of maternal deaths are caused by severe preeclampsia and eclampsia. The causes of maternal mortality in Indonesia are hemorrhage (30.3%), preeclampsia (27.1%), infection (7.3%), abortion (1.6%), prolonged labor (1.8%), and others (40.4%) in 2013 (Ministry of Health of the Republic of Indonesia, 2017).

The incidence of preeclampsia/eclampsia in Cirebon Regency in 2017 was 46%, with 39 maternal deaths out of 47,585 live births. In 2016, the number of maternal deaths increased to 48 out of 47,115 live births. The absolute number of maternal deaths in 2017 decreased compared to 2016. Cirebon District Health Office (2018, in the Midwifery Journal 2020).

From the above percentage data, it can be seen that preeclampsia is one of the causes of maternal mortality. Preeclampsia is hypertension during pregnancy characterized by blood pressure exceeding 140/90 after 20 weeks of gestation, accompanied by proteinuria exceeding 300 mg/24 hours (Nugroho 2013).

Based on the results of a preliminary study conducted at the Majasem Health Center, Cirebon City in April 2022, there were data on pregnant women who underwent antenatal care (ANC) K1 and K4 from 2019/2022 (January to March) with results showing 488 pregnant women who underwent ANC in 2019, 464 pregnant women who underwent ANC in 2020, 498 pregnant women who underwent ANC in 2021, and 133 pregnant women who received ANC from January to March 2022. Meanwhile, the incidence of preeclampsia from January to March 2019/2022 showed a decrease, though not significant. In 2019, there were 9 pregnant women who experienced preeclampsia, in 2020, there were 11 pregnant women who experienced preeclampsia, while in 2021, there were 8 pregnant women who experienced preeclampsia, and from January to April, there were 5 who experienced preeclampsia.

Antenatal care is generally considered the most effective method for pregnancy care. However, the effectiveness of antenatal care programs in reducing infant mortality has not been thoroughly evaluated for low-income groups and vulnerable women (Situmorang, 2016).

By regularly undergoing ANC, early detection of abnormalities, particularly those related to preeclampsia, can be achieved, thereby preventing mild preeclampsia, severe preeclampsia, or eclampsia and enabling appropriate management.

Objective

This study aims to determine the relationship between compliance with antenatal care visits and preeclampsia in pregnant women in the Majasem Public Health Center (Puskesmas) area of Cirebon City.

Method

The research method used in this study is a quantitative descriptive correlational study with a retrospective approach. The sampling technique employed was total sampling, involving 33 respondents. The instrument used was a data summary sheet. Data analysis was conducted using the chi-square test. The study was conducted at the Majasem Public Health Center in Cirebon City from May to June 2022.

The sample in this study consisted of pregnant women with preeclampsia from January 2019 to June 2022, based on medical records from the pregnant women's cohort book. In the Majasem Public Health Center work area in Cirebon City in 2019, there were 9 pregnant women who experienced preeclampsia, in 2020, there were 11 pregnant women with preeclampsia, while in 2021, there were 8 pregnant women with preeclampsia, and in January/June, there were 5 pregnant women with preeclampsia. The sample was selected using total sampling technique, with inclusion and exclusion criteria determined.

This study has undergone an ethical review conducted at the Ethics Committee of STIKes Mahardika Cirebon with no. 093/KEPK.STIKMA/VII/2022.

Results

TABLE 1. Frequency distribution of antenatal care compliance among pregnant women with preeclampsia in the working area of the Majasem Community Health Center, Cirebon City

Antenatal care compliance	F	%
Antenatal compliance		
Care Compliant	12	36,4
Non-compliant	21	63,6

Source: Primary Data 2022

Based on Table 1, it shows that the majority of respondents who were non-compliant with antenatal care visits numbered 21 (63.6%), while the number of compliant respondents was the lowest at 12 people (36.4%).

TABLE 2. Frequency Distribution of Preeclampsia in Pregnant Women in the Working Area of the Majasem Community Health Center, Cirebon City

Characteristics	F	%
Preeclampsia		
Severe	7	21,2
Mild	26	78,8

Source: Primary Data

Table 2 shows that the majority of respondents experienced mild preeclampsia, namely 26 people (78.8%), and 7 people (21.2%) experienced severe preeclampsia.

TABLE 3. Relationship between Antenatal Care Compliance and Preeclampsia in Pregnant Women in the Working Area of the Majasem Community Health Center, Cirebon City

	Preeklamsia		Total	P value
	Heavy	Light		
ANC Visit Compliance				0,68 7
Compliant	3	9	12	
Non-Compliant	4	17	21	
Total	7	26	33	

Based on the Chi-Square test in Table 3, there was no significant association between compliance with antenatal care visits and preeclampsia among pregnant women in the service area of the Majasem Health Center in Cirebon City. Among those who complied with antenatal care, there were 12 women (36.4%), and among those who did not comply, there were 21 women (63.3%). On average, 26 women (78.8%) experienced mild preeclampsia, and 7 women (21.2%) experienced severe preeclampsia. severe preeclampsia were 7 (21.2%). The P-value for the relationship between compliance with antenatal care visits among pregnant women in the service area of the Majasem Health Center in Cirebon City was 0.687. Since the P-value of 0.687 is greater than 0.5, the alternative hypothesis (H_a) is accepted, meaning there is no significant relationship between compliance with antenatal care visits and preeclampsia among pregnant women in the service area of the Majasem Health Center in Cirebon City.

Discussion

The results of the above study show that the majority of pregnant women with preeclampsia who attended antenatal care visits at the Majasem Community Health Center in Cirebon City were compliant, with 12 (36.4%) being compliant and 21 (63.6%) being non-compliant. This indicates a lack of compliance with antenatal care visits among pregnant women with preeclampsia at the Majasem Community Health Center in Cirebon City.

Compliance with antenatal care visits can be defined as adherence to visiting healthcare facilities by pregnant women in accordance with the recommendations of

healthcare professionals, such as midwives or specialists, in line with established antenatal care (ANC) standards. (in the nursing journal).

Tutik Ekasari (2019) states that to reduce pregnancy complications, pregnant women must undergo regular ANC. Prenatal examinations aim to monitor pregnancy development, ensure the well-being of the mother and fetal growth, and improve and maintain the physical, mental, and social health of the mother and baby. Detecting issues or complications and potential risks that may arise during pregnancy. Preparing for a safe pregnancy and childbirth with minimal trauma to the mother. Preparing the mother for the postpartum period and ensuring exclusive breastfeeding proceeds normally.

According to the researcher's assumption, ANC visit coverage is not related to preeclampsia because ANC is not a causative factor for the occurrence of preeclampsia. The coverage of irregular or unscheduled antenatal care (ANC) visits is caused by various factors, including the distance between the home and health services, lack of funds, lack of support from family or spouse, and the mother's lack of knowledge about the importance of pregnancy check-ups.

Based on the above analysis, most cases of preeclampsia among pregnant women at the Majasem Health Center in Cirebon City fall into the mild preeclampsia category, with 26 cases (78.8%).

The results of this study align with the findings of Eloq Faiqoh et al. (2014), which showed that out of 35 respondents, the majority (31 or 51.7%) attended antenatal care (ANC) during their pregnancy, but the results were not statistically significant, meaning that ANC visits did not have a significant association with the occurrence of preeclampsia.

According to the study by Evin Novianana Sari (2021) with 34 pregnant women as respondents, the statistical test using the chi-square test revealed a $p\text{-value of } 1.000 > 0.05$, indicating no significant association between compliance with antenatal care (ANC) and the occurrence of preeclampsia.

According to the study by Destri Wulandari, et al., with 32 respondents, 9 respondents (28.1%) had irregular ANC visit coverage, and 23 (71.9%) had regular ANC visit coverage, with a $p\text{-value of } 1.000$, meaning there is no significant association between irregular ANC visit coverage and protection from preeclampsia.

Conclusion

It can be concluded that most pregnant women with preeclampsia in the working area of the Majasem Community Health Center in Cirebon City were not compliant in attending antenatal care visits (63.6%) and the majority experienced mild preeclampsia (78.8%). However, no significant relationship was found between compliance with antenatal care visits and the incidence of preeclampsia ($p = 0.687$). These results are expected to serve as a reference for the development of nursing science and further research in efforts to improve the health of pregnant women.

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