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FAKTORS ASSOCIATED WITH THE INCIDENCE OF PREECLAMPSIA IN PREGNANT WOMEN at RSUP DR M DJAMIL PADANG

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Abstract

Background: Preeclampsia still a complication of pregnancy is in need of special attention if not to be overcome by directly resulting in an increase in the number of deaths of pregnant women. The factors that can cause preeclampsia for pregnant women among them are age, parity, and the nutritional status of mothers. This research seeks to capture that deals with incident preeclampsia for pregnant women at RSUP Dr. M. Djamil Padang of 2022. Method: This research is quantitative research with an observational analytical design because there is no treatment of the objects studied. The research design used was cross sectional, that is, measurements and observations were carried out only once at a time. **Result**: The result showed 64,3 % preeclampsia pregnant women with heavy. This research result indicates the majority of pregnant women with a heavy risk preeklampsia 60,5 % (p = 0,046; OR = 2,263; CI 95% = 1,081-4,736), the parity of risky 56,6 % (p = 0,040; OR = 2,297; CI 95 % = 1,101-1,790) and nutritional status of risky 67,4 % (p = 0,011; OR = 2,888; CI 95 % = 1,341-6,215) 95. **Conclusion**: It's concluded that there's an age relationship, parity and nutrition status of pregnant mothers against preeclampsia. Advice for health officials is particularly midwifes to increase counseling and socialization regarding pregnancy complications and raise caution to patients who are at risk of preeclampsia.

keyword : preeclampsia, pregnant women, age, parity, nutritional status

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INTRODUCTION

According to the World Health Organization (WHO) maternal mortality rates (MMRs) are still very high, about 810 women die worldwide from complications related to pregnancy or childbirth, and about 295,000 women die during the 462/100,000 live births maternal mortality rate in developing countries. While the maternal mortality rate and infant mortality rate in developed countries of 11/100,000 live births are high caused by several factors, such as severe bleeding, infection, complications from childbirth, unsafe abortion and one of them is preeclampsia and eclampsia (Pratiwi, 2020). Meanwhile, MMR caused by severe preeclampsia and eclampsia in a number of developing countries is still quite high, for example in Indonesia, severe preeclampsia and eclampsia are the cause of 30-40% of maternal deaths. (Legawati &; Nang, 2017).

In Indonesia, the number of maternal deaths collected from the recording of family health programs at the Ministry of Health in 2021 showed 7,389 deaths, an increase of 59.69% compared to the previous year, namely, in 2020 it showed 4,627 deaths and the number was said to increase by 09.61% in 2019 of 4,221 deaths or a decrease of 00.11%. Based on causes, most maternal deaths in 2021 were caused by 2,982 cases of COVID-19, 1,320 cases of bleeding, 1,077 cases of hypertension in pregnancy, 335 cases of heart disease, 207 cases of infection, 80 cases of metabolic disorders and 65 cases of circulatory system disorders (Kemenkes, 2021).

Based on routine reports from the Padang City Health Office in 2021, 30 cases were found, this number increased compared to 2020 (21 people) and in 2019 (16 people). Details of maternal deaths consist of the deaths of 7 pregnant women, the deaths of 6 maternity mothers and the deaths of postpartum mothers 17 people. Meanwhile, when viewed based on the age of mothers aged <20 years as many as 2 people, aged 20 to 34 years as many as 16 people and over 35 years as many as 12 people. The trend of maternal mortality cases every year varies, pregnant women deaths have increased and are the highest in the last 5 years, maternity maternal deaths have also increased, while postpartum maternal deaths have decreased by 1 case (Dinkes Padang, 2021).

Preeclampsia causes symptoms in pregnant, maternity and postpartum women consisting of hypertension, edema and proteinuria that appear in 20 weeks

of pregnancy until the end of the first week after delivery (Nur &; Yunita, 2021). Where preeclampsia will experience changes in blood pressure of at least 140/90 mmHg in pregnancy after 20 weeks accompanied by proteinuria (Sutiati Bardja, 2020).

METHOD

This research is a quantitative study using an analytic approach to cross-sectional design. This research was carried out in the sub-recorded medical section RSUP Dr.M.Djamil Padang. Data collection took place in May 2023. The sample in this study is a preeclampsia-diagnosed pregnant mother of 129 people obtained with total sampling techniques. Data collection was taken from patient medical records and analyzed univariate and bivariate (chi-square) with CI of 95 %.

RESULT

Research Results

Based on research that has been conducted in the medical record section of Dr. M. Djamil Padang Hospital in May 2023, the population in this study is all mothers diagnosed by doctors with preeclampsia at Dr. M. Djamil Padang Hospital in 2022 as many as 170 patients with samples are all members of the population who meet the inclusion criteria, which is 129 patients because 41 patients were excluded.

Table 1. Population and Sample of Preeclampsia Patients at Dr. M. Djamil Padang Hospital in 2022

Year	Population	Exclusion	Sample
2022	170 patients	41 patients	129 patients

Univariate Analysis

Table 2. Frequency Distribution of Preeclampsia Classification in Pregnant Women at Dr. M. Djamil Padang Hospital in 2022

Incidence of Preeclampsia	f	%
Severe Preeclampsia	83	64,3
Mild Preeclampsia	46	35,7
Sum	129	100,0

Based on Table 2 it can be seen that out of 129 mothers, most pregnant women who experienced the incidence of severe preeclampsia as many as 83 people (64.3%).

Table 3. Age Frequency Distribution in Preeclampsia at Dr. M. Djamil Padang Hospital in 2022

Dependent Variables	f	%
Age		
1.At risk (< 20 years old and >35)	78	60,5
2.No Risk (20-35 years old)	51	39,5

Based on Table 3 it can be seen that of 129 mothers, most pregnant women with the incidence of preeclampsia is more found in mothers at risk age as many as 78 people (60.5%).At risk age < 20 years as many as 5 people and age at risk > 30 years as many as 73 people.

Table 4. Parity Frequency Distribution in Preeclampsia Incidence at Dr. M. Djamil Padang Hospital in 2022

Dependent Variables	f	%
Parity		
1.Risk (primípara and grand multipara >3)	73	56,6
2.No Risk (multípara 2-3)	56	43,4

Based on Table 4 it can be seen that of the 129 mothers, most pregnant women with the incidence of preeclampsia were more found in mothers with risk parity as many as 73 people (56.6%). At primiparous risk parity as many as 34 people and at grand multipara risk parity > 3 as many as 39 people.

Table 5. Frequency Distribution of Nutritional Status in the Incidence of Preeclampsia at Dr. M. Djamil Padang Hospital in 2022

Dependent Variables	f	%
Nutritional Status		
1.Risk (BMI <18.5% and $\geq$ 30% kg/m^2)	87	67,4
2.No Risk (BMI18.5%-29.9% kg/m^2)	42	32,6

Based on Table 5 it can be seen that of the 129 mothers, most pregnant women with the incidence of preeclampsia were found in mothers with at-risk nutritional status as many as 87 people (67.4%). In nutritional status at risk of <18.5% kg/m 2 as many as 2 people and nutritional status > 30% kg/m2 as many as 85 people.

Bivariate Analysis

Table 6. Relationship between Age and Preeclampsia in Pregnant Women at Dr. M. Djamil Padang Hospital in 2022

Age	Incidence of Preeclampsia				Sum		OR (CI 95%)	*p*
	Heavy		Light					
	f	%	f	%	f	%		
Risky	56	71,8	22	28,2	78	100,0	2,263	0,046
No Risk	27	52,9	24	47,1	51	100,0	(1,081-4,736)	
Sum	83	64,3	46	35,7	129	100,0		

Based on Table 6 showed that the proportion of severe preeclampsia incidence was higher at at-risk ages (< 20 years and >35 years) which was 56 people (71.8%). While mothers with severe preeclampsia in mothers of non-risk age (20-35 years) were 27 people (52.9%). The results of the chi-square statistical test on the preeclampsia variable with a *p-value* of 0.046 which mean a *p-value* of <0.05 show that there is a significant relationship between age and the incidence of preeclampsia at Dr. M. Djamil Padang Hospital in 2022. The value of OR=2.263 which means the age at risk (< 20 years and >35 years) is 2.263 times the experience of preeclampsia compared to the age not at risk (20-35 years).

Table 7. Parity Relationship with Preeclampsia Incidence in Pregnant Women at Dr. M. Djamil Padang Hospital in 2022

Parity	Incidence of Preeclampsia				Sum		OR (CI 95%)	*p*
	Heavy		Light					
	f	%	f	%	f	%		
Risky	53	72,6	20	27,4	73	100,0	2,297	0,040
No Risk	30	53,6	26	46,4	56	100,0	(1,101-4,790)	
Sum	83	64,3	46	35,7	129	100,0		

Based on Table 7 showed that the proportion of severe preeclampsia incidence was more found in risk parity (primiparous and grand multipara >3) which was 53 people (72.6%). While mothers with severe preeclampsia in parity mothers were not at risk (multipara 2-3) as many as 30 people (53.6%). The results of the chi-square statistical test on the preeclampsia variable with a *p-value* of 0.040 which means a *p-value* of <0.05 show that there is a significant relationship between parity and the incidence of preeclampsia at Dr. M. Djamil Padang Hospital in 2022. OR=2.297 means that risky parity (primiparous and grand multipara >3) is 2.297 times the risk of preeclampsia compared to non-risky parity (multipara 2-3).

Table 8. Relationship between Nutritional Status and Preeclampsia in Pregnant Women at Dr. M. Djamil Padang Hospital in 2022

Nutritional Status	Incidence of Preeclampsia				Sum		OR (CI 95%)	*p*
	Heavy		Light					
	f	%	f	%	f	%		
Risky	63	72,4	24	27,6	87	100,0	2,888	0,011
No Risk	20	47,6	22	52,4	42	100,0	(1,341-6,215)	
Sum	83	64,3	46	35,7	129	100,0		

Based on Table 8 shows that the proportion of severe preeclampsia incidence is more found in risk nutritional status (BMI <18.5% and >30 kg / m2) which is 63 people (72.4%). While mothers with severe preeclampsia in mothers nutritional status are not at risk (BMI 18.5%-29.9% kg /m2) which is as many as 20 people (47.6%). The results of the chi-square test on the preeclampsia variable with a *p-value* of 0.011 which means a *p-value* of <0.05 show that there is a significant relationship between nutritional status and the incidence of preeclampsia at Dr. M. Djamil Padang Hospital in 2022. The value of OR=2.888 means that the nutritional status at risk (BMI <18.5% and >30 kg/m2) is 2.888 times the risk of developing preeclampsia compared to the non-risk nutritional status (BMI 18.5%-29.9% kg/m2).

CONCLUSION AND SUGGESTION

Based on the results of research conducted on factors related to the incidence of preeclampsia in pregnant women at Dr. M. Djamil Padang Hospital in 2022, the following conclusions can be drawn, there are factors associated with the incidence of preeclampsia consisting of factors of age, parity and nutritional status. It is expected that the midwife profession will inform about the dangers of pregnancy in mothers who are too young and too old as well as other factors that are at risk of increasing the occurrence of preeclampsia and the impact that will occur on the mother and fetus. It is expected that the community, especially pregnant women, will consult and check their health at healthcare facilities in preparation for planning pregnancy and the development of maternal and fetal health and to detect complications in pregnancy.

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