

The Relationship Between the Cultural Practice of Abstinence During Pregnancy and the Incidence of Preeclampsia in the Working Area of the Tamanan Public Health Center, Bondowoso

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ABSTRACT

Introduction: The culture of abstinence is a habit or belief of the community that prohibits pregnant women from consuming certain types of food. Mothers tend not to consume sea fish, shrimp, and eggs which can cause pregnant women to experience malnutrition which increases the risk of preeclampsia.

Method: This study uses quantitative research with a correlation design and uses a cross-sectional approach. Conducted on 134 population of pregnant women with 100 samples. Collecting data by questionnaires and study of documents through the MCH handbook. Analysis using Spearman Rho statistic at p-value <0.05.

Result: The results of this study indicate a p-value of 0.000 with an R-value of 0.621. There is a relationship between cultural practices of abstinence during pregnancy and the incidence of preeclampsia.

Conclusion: The practice of abstinence from eating is still widely practiced in rural communities. This condition can be a risk factor for preeclampsia in pregnant women.

Keywords: Pregnant women; Abstinence culture; Preeclampsia

Introduction

Preeclampsia is a symptom that appears in pregnant women with a gestational age of more than 20 weeks such as hypertension (140/90 mmHg), edema, and proteinuria (> 0.3 g) (Febriyeni et al., 2021). Until now, the incidence of preeclampsia mostly occurs in pregnant women who have a Body Mass Index Overweight, namely 25- $\rightarrow$ 29.9 Kg/m². This is due to poor eating habits of pregnant women so pregnant women are underweight or overweight (Handayani & Nurjanah, 2021). Nutritional fulfillment of pregnant women can be influenced by cultures such as excessive eating habits and beliefs about abstinence from eating which are factors that cause preeclampsia (Azza & Susilo, 2021).

The prevalence of preeclampsia is 10% of pregnant women worldwide and causes 76,000 maternal deaths and 500,000 infant deaths annually (Kemenkes, 2021). WHO reports that cases of preeclampsia in developing countries have a ratio of seven times higher than in developed countries with a prevalence of 18%: 1.9% (Martadiansyah et al., 2019). The incidence of preeclampsia in Indonesia is around 3-10% of all pregnancies. The number of Maternal Mortality Rates caused by preeclampsia is as many as 1,110 cases (Kemenkes, 2020).

Based on the results of the preliminary study, it was found that in the Bondowoso district with a percentage of 6% of the total number of pregnant women experiencing preeclampsia or 531 of 8,967 pregnant women until December 2021 and 70% or around 290 preeclampsia mothers had a BMI > 29.9 Kg/m² or were obese (Dinkes, 2021). The results of interviews with midwives and document studies obtained data on mothers with preeclampsia at Tamanan Health Center 36 pregnant women from 513 pregnancies during January-December 2021.

The culture that develops dietary restrictions for pregnant women occurs in women in China, and Hong Kong, among others, eating shrimp because it will cause skin allergies, rabbit meat, which will cause cleft lip in newborns, and beef which will also affect the health of the fetus (Arzoaquoi et al., 2015). Where these conditions support some of the symptoms of preeclampsia. This is also in line with research (Azza & Susilo, 2021) that pregnant women who consume excessive carbohydrates have 5.25 times the occurrence of preeclampsia, and mothers with a lack of folic acid consumption have a risk of 17.7 times experiencing preeclampsia.

Adequate nutritional intake during pregnancy is very important to help the growth of the fetus in the mother's womb. Nutrition during pregnancy that must be met includes the supply of

protein, calcium, phosphate, iron, vitamins, and minerals. Lack of nutritional intake will cause disturbances or complications for both the mother and the fetus. Complications that can occur include miscarriage, bleeding, hypertension in pregnancy, gestational diabetes mellitus, and preeclampsia (Febriyeni et al., 2021).

Judging from the transcultural nursing strategy according to Leininger (D. M. P. Putri, 2017), the culture of abstinence adopted by pregnant women needs to be restructured because it can affect the nutritional fulfillment of pregnant women and cause pregnancy complications. Based on the results of the presentation, it is necessary to conduct a study entitled "The Relationship between Cultural Practices of Abstinence During Pregnancy and the Incidence of Preeclampsia in the Working Area of the Tamanan Public Health Center, Bondowoso"

Method

This research is a quantitative research using a correlational research design with a cross-sectional approach. The population used in the study were all pregnant women in the working area of the Tamanan Public Health Center, Bondowoso Regency as many as 134 pregnant women. This study uses a probability technique with a cluster random sampling approach with a sample size of 100 respondents using the slovin formula. Data collection in 2022, taken using a culture of abstinence questionnaire with the Guttman scale and the study of MCH book documents, the data analysis of this study used univariate and bivariate.

Data collection was carried out by researchers with the method of distributing 14 questionnaires on the culture of abstinence from eating, while for the incidence of preeclampsia using the observation sheet in the MCH handbook. Data analysis in research is an important part of data collection. This study used univariate analysis, the results obtained with the frequency distribution in the general data category, while the bivariate data analysis used in this study was the Spearman Rho test with a p-value $<0,05$. This research has received ethical approval from the Faculty of health science Universitas Muhammadiyah Jember with letter number 0090/KEP/FIKES/VI/2022.

Results

Table 1. Frequency distribution by age, last education, BMI, religion, work, history of hypertension, gestational age in the Work Area of Puskesmas Tamanan, Bondowoso Regency (n=100)

Characteristics	N	%
Age		
a. <20 years	9	9%
b. 21 – 34 years old	79	79%
c. >35 years	12	12%
last education		
a. primary school	28	28%
b. Junior High School	24	24%
c. Senior High School		
d. College	33	33%
BMI		
a. <17 kg/m ²	15	15%
b. 17-23 kg/m ²		
c. 23-27 kg/m ²	12	12%
d. >27 kg/m ²	41	41%
Religion	31	31%
a. Islam	16	16%
b. Christian		
c. Hindus/Buddha	100	100%
Work	-	-
a. Government employee	-	-
b. Farmer		
c. Housewife	1	1%
d. Entrepreneur	5	5%
e. etc	68	68%
History of hypertension	13	13%
a. there isn't any	13	13%
b. <1 year		
c. 1-5 years	81	81%
d. >5 years	12	12%
Gestational age	7	7%
a. 21-27 week	0	-
b. 28-35 week		
c. 36-40 week	18	18%
	43	43%
	39	39%

Table 1. shows that the distribution of data regarding the characteristics of respondents in this study differs between categories that have been determined. The age category of pregnant women shows the results of 100 respondents where most of the ages are in the range of 21-34. In the last education category, most of the mothers are in their last high school education. In the BMI category, the majority of the BMI is 17-23 kg/m² as many as 44 people. In the category of

respondents based on the mother's religion, all of them are Muslim. In the category of respondents based on work, most of the mothers have housewives. In the category of history of hypertension, for most mothers, there isn't any history. in the category of respondents' gestational age, most of them in 28-35 weeks.

Table 2. Frequency Distribution of Respondents' Abstinence Cultural Practices in the Working Area of the Tamanan Health Center, Bondowoso Regency. June 2022 (n = 100)

Cultural Abstinence	Practices of	Frequency (person)	Percentage (%)
Practicing the Culture of Abstinence		34	34%
Not Practicing Abstinence Culture		66	66%
Total		100	100%

Table 2 shows that of the 100 respondents, the practice of abstinence from eating during pregnancy in the Tamanan Community Health Center, Bondowoso Regency, based on the frequency distribution table 2 above, it can be seen that most pregnant women do not abstain from eating as many as 66 respondents with a percentage (66%).

Table 3. Frequency Distribution of Respondents' Preeclampsia in the Working Area of Tamanan Public Health Center, Bondowoso Regency. June 2022 (n = 100)

Preeclampsia Incident	Frequency (person)	Percentage (%)
Preeclampsia	19	19%
No Preeclampsia	81	81%
Total	100	100%

Table 3 shows that of the 100 respondents, Based on the frequency distribution table 3 above, it can be seen that most of the pregnant women did not experience preeclampsia with a total of 81 respondents (81%).

Table 4. Cross tabulation The Relationship between the Cultural Practice of Abstinence During Pregnancy and the Incidence of Preeclampsia in the Working Area of the Tamanan Public Health Center, Bondowoso Regency. N=100

Abstinence Practices	Cultural	Preeclampsia incident		Spearman Uji test	
		Preeclampsia	No Preeclampsia	P value	r
		N %	n %	0.000	0,621
Practicing the Culture of Abstinence	18	18%	16 16%		
Not Practicing the Culture of Abstinence	1	1%	65 65%		

In table 4 the results of the Spearman Rank (Rho) test, it is known that if the number of N is 100, then the p-value is 0.000 which means $P < 0.05$ with a count of 0.621 which is included in the strong category (0.60-0.79). As the basis for the decision above, it can be concluded that H1 is accepted, which means that there is a significant relationship between the Cultural Practice of Abstinence During Pregnancy and the Incidence of Preeclampsia in the Working Area of the Tamanan Health Center, Bondowoso Regency. The correlation in this study is negative, so the higher the abstinence culture behavior, the higher the risk of experiencing preeclampsia.

Discussion

Based on the results of the analysis that has been carried out by researchers on the entire sample of 100 respondents as shown in table 4. it is known that some pregnant women practice abstinence from eating as many as 34 people with a percentage (34%) while pregnant women who do not practice abstinence from eating are 66 people with a percentage (66 %). In general, several factors can influence a person to practice abstinence culture, namely beliefs, culture or customs, level of knowledge, and perceptions of the culture of abstinence from food, age, and education (Chahyanto & Wulansari, 2018).

Practice of abstinence from eating, some several potentials or factors can support this, one of which is the level of education (S. I. Putri et al., 2020). Pregnant women with low levels of education will more easily believe in the culture or myth of abstinence from eating without seeing the risks that will be caused. Meanwhile, mothers who have higher education tend to pay

more attention to the impact or risks that will be caused when implementing a culture of abstinence from eating on their health (Yunus et al., 2021).

Based on the results of research conducted in the Tamanan Public Health Center with a sample of 100 respondents, it can be seen that most of the pregnant women experienced preeclampsia with a percentage of 19 people (19%) while pregnant women who did not experience preeclampsia were 81 people with a percentage (81%). In general, many factors predispose to the occurrence of preeclampsia (Retnaningtyas, 2021) such as obesity, impaired blood flow to the uterus, a history of hypertension, pregnancy at the age of fewer than 20 years or more than 35 years, poor nutrition of pregnant women and culture related to diet.

Related to the incidence of preeclampsia, several possibilities are thought to affect the incidence of preeclampsia, one of which is the age of the pregnant woman. Age has a close relationship with the incidence of preeclampsia, especially in pregnant women who are under 20 years old or pregnant women who are over 35 years old or in other words pregnant at an extreme age (Rahmi & Djokosujono, 2017). Based on research (Gustri et al., 2016) the higher the gestational weight, the higher the risk of experiencing preeclampsia. (Hamzah et al., 2021) explained his research, namely weight gain of 1–10 kg primigravida mothers had a 1.540 times greater risk of experiencing preeclampsia compared to a weight gain of 10–20 kg, while according to the results of the study (Pratiwi et al., 2021) preeclampsia was found to be a factor Maternal in the form of Body Mass Index (BMI) 25 kg/m² and parity or gestational age can be a risk factor, namely at the age of 16-20 months.

Based on the results of the Spearman Rank (Rho) test, it is known that if the number of N is 100, then the p-value is 0.000 which means $P < 0.05$ with an r-value of 0.621 which is included in the strong category (0.60-0.79). As the basis for the decision above, it can be concluded that H1 is accepted, which means that there is a significant relationship between the Cultural Practice of Abstinence During Pregnancy and the Incidence of Preeclampsia in the Working Area of the Tamanan Health Center, Bondowoso Regency. The correlation in this study is negative, so the higher the abstinence culture behavior, the higher the risk of experiencing preeclampsia.

The practice of abstinence from eating should not be carried out by pregnant women because it will have an impact on their health status and even risk pregnancy complications due to lack of nutritional intake. During pregnancy, pregnant women need more nutrients that must

be met to help the development of the fetus (Diana et al., 2018). Nutritional needs during pregnancy increase along with the physiological changes that occur and must support the fetus in the womb so that lack of nutrition will hinder fetal development and will experience impaired placental development so that preeclampsia will occur during pregnancy. Where preeclampsia can cause death in the mother and fetus or the fetus is born with defects (Azza et al., 2021). Pregnant women have higher nutritional requirements than non-pregnant women. The food consumed must contain balanced nutrition, especially marine fish, eggs, shrimp, and squid because they contain lots of protein and folic acid to maintain endurance and help the development of the fetus in the womb (Allen et al., 2017). Mothers are also advised not to consume herbal medicine during pregnancy because of the unknown content in herbal medicine and also avoid excessive carbohydrate consumption because it will increase the risk of preeclampsia.

For pregnant women who consume marine fish, their micronutrient needs will met such as calcium and folic acid so that it becomes one of the preventions of preeclampsia. When pregnant women experience nutritional deficiencies such as magnesium, calcium, protein, and folic acid whose nutrients are found in fish, squid, eggs, and shrimp, they will have a risk of experiencing preeclampsia due to a lack of consumption of foods with complete nutrients.

The nutritional content in marine fish can improve the nutrition of pregnant women so that the development of the fetus, especially the placenta, will develop properly. This is in line with the research (Azza et al., 2021) with the research title "Fish as A Source of Micronutrients In Preventing The Risk of Pre-Eclampsia In Pregnant Women" which states an analysis between daily consumption of fish-based nutrition and the incidence of preeclampsia using chi-square there is a relationship between the two, while women who do not consume fish on the daily menu will be at risk of experiencing preeclampsia as much as 2.69 times.

Conclusion

Based on the results of the study, it can be concluded that 34 respondents practice abstinence culture practices, and 19 respondents experience preeclampsia. Based on the results of the analysis of the Spearman Rank (Rho) test, the relationship between cultural practices of abstinence during pregnancy and the incidence of preeclampsia was obtained with a p-value of

0.000 with an R-value of 0.621, which means that H1 is accepted, that is, there is a relationship between cultural practices of abstinence during pregnancy and the incidence of preeclampsia.

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