Age And Parity Toward Chronic Energy Deficiency (CED) Incident Of Pregnant Mother In Puskesmas Gaji

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ABSTRACT

Pregnant mother with Chronic Energy Deficiency (CED) are pregnant women who suffer from a lack of calories and protein (malnutrition). Factors that influence CED pregnant women include age and parity. Age will affect the ability or experience of parents in providing nutrition, while parity is a woman who has given birth to a live (viable) baby. The purpose of this study was to determine the correlation between age and parity with the incidence of CED in pregnant women at the Gaji Kerek Health Center, Tuban Regency. The study used comparative analysis with a case and control approach. The sample are 80 people consisting of 40 pregnant women with CED and 40 without CED, sample was taken by simple random sampling technique. In this study, age and parity were the independent variables and chronic energy deficiency was the dependent variable. Data collected from secondary data were then analyzed by testing the contingency coefficient with a significance of $\alpha < 0.05$. The study showed most of the pregnant women who experienced CED (case group) occurred at the risk age and almost all of the pregnant women who did not experience CED (control group) occurred at the non-risk age. Most of the pregnant women who experienced CED (case group) and without CED (control groups) were multiparous. Suggested to health workers at the Puskesmas Gaji to screen nutritional status as early as possible in their teens and carry out treatment to reduce the incidence of CED in pregnant women.

Keywords: *Age, parity, CED, pregnant women*

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INTRODUCTION

The high maternal mortality rate can occur due to several factors, both direct and indirect. One of the indirect factors that plays a big role in complications in pregnant women and

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childbirth is pregnant women with Chronic Energy Deficiency (CED).[1]

According to data from the World Health Organization (WHO) in 2015, the number of maternal deaths reached 830 people, which were caused by complications of pregnancy or childbirth throughout the world every day, the majority of maternal deaths occurred in developing countries, including Indonesia. The target of the Sustainable Development Goals (SDGs) 2015–2030, seeks to reduce maternal mortality worldwide to less than 70 per 100,000 births, with no country having a maternal mortality rate more than twice the global average.[2]

The number of maternal deaths compiled from family health program records at the Ministry of Health in 2020 shows that there were 4,627 deaths in Indonesia. This number shows an increase compared to 2019, namely 4221 maternal deaths occurred.[2]

Data in Tuban Regency in the last five years shows an increase in the prevalence of cases of chronic energy deficiency in pregnant women. In 2018 it was 11.8%, in 2019 it was 12.6%, in 2020 it was 14.6%, in 2021 it was 14.7% and in 2022 it was 14.8% while the 2022 District Health Strategic Plan was 7 .4%. This condition illustrates that the prevalence of Chronic Energy Deficiency (CED) pregnant women has exceeded the target set by the Tuban Regency Health Strategic Plan which should be lower or not exceed the target of the Tuban Regency Health Strategic Plan. In 2022 data there are 6 health centers in Tuban Regency with a fairly high prevalence of cases of CED pregnant women.[3]

Pregnant women with chronic energy deficiency (CED) are pregnant women with anthropometric examination results, Upper Arm Circumference <23.5 cm. The cause of CED is the result of an imbalance between intake to fulfill needs and energy expenditure. The nutritional status of pregnant women can be determined by measuring upper arm circumference. If it is less than 23.5 cm then the pregnant mother is chronically energy deficient (CED). This means that the mother has experienced a state of malnutrition for a long period of time.[4]

CED during pregnancy can have an effect on both the mother and the fetus she is carrying, including: feeling tired, tingling, the face looks pale, difficulty giving birth (long labor) and bleeding and the milk that comes out is not enough to meet the baby's needs, so the baby will

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lack milk. mother while breastfeeding. Meanwhile, the effects of CED during pregnancy on the fetus include: miscarriage, disrupted fetal growth resulting in the baby being born with a low birth weight (LBW), fetal brain development being delayed, resulting in the possibility that the child will have less intelligence, the baby will be born prematurely (premature) and infant death.[1]

Factors that influence CED pregnant women include socio-economic factors and biological factors. Socioeconomic factors consist of family income, maternal education, consumption pattern factors and behavioral factors. Meanwhile, biological factors consist of the age of the pregnant mother, pregnancy spacing, parity and body weight during pregnancy. Age is needed to determine the amount of calories and nutrients that will be given. Age will influence the ability or experience that parents have in providing nutrition.[1]

Giving birth to a child at a young or too old maternal age results in low quality of the fetus/child and will also be detrimental to the mother's health. Because in mothers who are too young (less than 20 years) there can be competition for food between the fetus and the mother herself who is still in her infancy and there are hormonal changes that occur during pregnancy. So the best age is more than 20 years and less than 35 years, so it is hoped that the nutritional status of pregnant women will be better.[4]

According to Supariasa (2002), giving birth to a child at a young or too old maternal age results in low quality of the fetus/child and will also be detrimental to the mother's health. In mothers who are too young (less than 20 years) there can be competition for food between the fetus and the mother herself who is still growing. The mother's age in the current pregnancy was measured as age ≤ 20 years, 21-35 years, > 35 years.[6]

Mothers with low parity have less knowledge about the nutritional intake needed during pregnancy, so mothers are still indifferent to the pregnancy they are experiencing. Meanwhile, mothers with high parity due to frequent childbirth cause the body's organ function to weaken so that they require sufficient energy intake to face the ongoing pregnancy. Risk at low parity can be managed with better obstetrical care, while the risk in high parity can be reduced or prevented with family planning.[7]

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MATERIAL AND METHOD

The study used analytical research with a case control research design which is used to determine the causes of disease by investigating the correlation between risk factors and the incidence of disease. The test in this research uses the contingency coefficient test.

In this study, the population was all pregnant women in the Gaji Community Health Center area in January - December 2022, totaling 354 pregnant women. The sample in this study was 80 pregnant women with CED and pregnant women without CED. The comparison of case and control samples was 1:1, the sample size for the case group was 40 CED pregnant women. Meanwhile, the control group was 40 pregnant women without CED.

RESULT

Tabel 1 Identification age of pregnant women in the case group (having CED) in the working area of the Gaji Community Health Center, Kerek District, Tuban Regency

No	Age	Frequency	Percentage (%)
1	Not at risk (20-35th)	10	25%
2	At risk (<20->35th)	30	75%
	Number	40	100

Based on table 1 above, it can be seen that most of the respondents who were pregnant with CED were at risk, namely 30 pregnant women (75%).

Table 2 Identification of Parity of Respondents for CED pregnant women (case group) in the Puskesmas Work Area Salary in 2022

Based on table 2 above, it can be seen that most of the 40 respondents were multipara, namely 21 pregnant women (52,5%)

No	Parity	Frequency	Percentage (%)
1	Primipara	19	47,5 %
2	Multipara	21	52,5 %
3	Grandemultipara	0	0
	Total	40	100 %

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Table 3 Incidence of CED by Age among Pregnant Women in the Working Area of Salary Health Centers in 2022

No	Age	Pregnant mother				Total	
		At CED		Not at CED			
		f	*%*	*f*	*%*	*f*	*%*
1	Not at Risk (20 – 35th)	10	23,3%	33	76,7%	43	100%
2	At Risk (<20 - >35)	30	81,1%	7	18,9%	37	100%
	Number	40	50%	40	50%	80	100%

Based on table 3 above, it show that almost all of the respondents who are not at risk are pregnant women who do not experience CED, namely 33 pregnant women (76.7), while almost all of the respondents who are at risk age are pregnant women who experience CED,

No	Parity	Pregnant mother				Total	
		At CED		Not at CED			
		f	*%*	*f*	*%*	*f*	*%*
1	Primipara	15	44,2%	19	55,8%	34	100%
2	Multipara	24	53,4%	21	46,6%	45	100%
3	Grandemultipara	1	100%	0	0	1	100%
	Number	40	50%	40	50%	80	100%

namely 30 pregnant women. (81.1)

Table 4 Incidence of CED based on Parity among Pregnant Women in the Working Area of Salary Health Centers in 2022

Based on table 4 above, it can be seen that respondents who have multiparous parity are mostly pregnant women who experience CED, namely 24 pregnant women (53.4), while respondents who have primiparous parity are mostly pregnant women who do not experience CED, namely 19 pregnant women (55.8)

DISCUSSION

The results of collecting and processing data taken from the register of pregnant women found that the majority of respondents who experienced CED were at risk (<20 &>35 years) of 30 (75%) pregnant women, of which 10 were not at risk (20-35 years). (25%) pregnant women. Meanwhile,

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respondents who did not experience CED were mostly at a non-risk age (20-35 years), namely 33 (82.5%) pregnant women, those aged (<20 &>35) years were found to be 7 (17, 5%) pregnant women.

In this study, the characteristics of respondents who did not experience CED were mostly multipara, namely 21 pregnant women (52.5%), and the characteristics of respondents who experienced CED were also mostly multipara, namely 24 pregnant women (60%). Grandemultipara is only found in mothers who experience CED as much as 1 pregnant mother (100%). This is possibly due to the mother's lack of experience and knowledge in examinations and lack of nutritional requirements, which can cause CED

Based on the research results, respondents with a risk age (<20 &>35 years) were found in pregnant women who experienced CED (case group) as many as 30 (81.1%) pregnant women and respondents with a non-risk age (20-35 years). found in the case group were 10 (23.3%) people. The results of the analysis obtained p-value = 0.000 (p <0.05) with a correlation strength of r = 0.450, meaning there is a correlation with a moderate correlation value, meaning there is a correlation between age and the incidence of CED in pregnant women in the working area of the Gaji Health Center in 2022.

Based on the description above, it can be explained that maternal age is one of the factors related to the incidence of CED, where in this study pregnant women aged <20 and >35 years were at greater risk of experiencing CED compared to pregnant women aged between 20-35 years. In the research results, most of the incidence of CED was found in the group of mothers aged <20 and >35 years, this can occur because the age <20 years is a developmental age where at that age a woman needs adequate nutritional intake to meet her body's needs for achieve good development so that if a woman experiences pregnancy at that age, the nutritional intake that should be used to meet her body's needs will be disrupted. Pregnancy that occurs at more than 35 years of age can also affect the nutritional condition of pregnant women because at that age the body begins to experience a decline in health, which can hinder the fetus's intake of nutrients which are distributed through the placenta. Apart from that, at the age of >35 years, many women experience changes in blood

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pressure and even an increase in blood sugar levels, so they have to limit their food intake in order to maintain a diet that suits their body condition. Meanwhile, on the other hand, a pregnant woman needs a fairly balanced nutritional intake so that this condition causes an increased risk of CED

This is also in line with Novitasari research at 2019 (7)that the average age of pregnant women who experience chronic energy deficiency is 20-35 years old, 17 respondents. This research is also supported by Rizkah and Mahmudiono at 2017(8) that the majority of respondents were pregnant women with chronic energy deficiency aged 20-35 years, namely 30 respondents. Apart from that, this research is also supported by research Fatimah and Fatmasari at 2019 (9) which shows that age influences the incidence of Chronic Energy Deficiency (CED) in pregnant women. The Study from Asmaul Husna etc also show that pregnant women aged < 20 years and > 35 years have a 13.5 times greater chance of experiencing CED than those aged 20 - 35 years. Pregnant women with low education have a 13.2 times greater chance of experiencing CED than those with higher education.[1]

The research results showed that 24 respondents (53.4%) who experienced CED had multiparous parity and 21 respondents (46.6%) who did not experience CED had multiparous parity. Many primiparous mothers experience CED due to lack of knowledge and experience in caring for pregnancy. Apart from that, CED often occurs in pregnant women in their first pregnancy. This is more due to psychological factors and mental and physical readiness to become parents, thus neglecting food intake for pregnant women.

The statistical test results obtained p-Value = 0.000 with a correlation strength of r = 0.531, meaning there is a correlation with a moderate correlation value, so H2 is accepted, meaning there is a parity correlation with the incidence of CED in pregnant women in the working area of the Gaji Health Center in 2022.

Research shows that the risk of CED in pregnant women increases with high parity. This means that the more pregnancies a woman has experienced, the greater the risk of CED she experiences during pregnancy. Every pregnancy requires adequate nutritional intake to support fetal growth and development. If a woman has multiple

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pregnancies, she must provide more and more frequent nutritional support, which may result in decreased nutritional quality or energy deficiency.

Women with high parity may tend to have less regular or unbalanced eating patterns due to busyness and higher responsibilities due to having more children. With increasing age and multiple pregnancies, a woman's body may experience a decrease in physiological capacity, which may affect her ability to cope with the burden of pregnancy. High parity women may have a shorter recovery time between pregnancies and subsequent pregnancies, which can lead to fatigue and decreased overall health.

This research is in line with research Rizkah and Mahmudiono.[8] which shows that from the gravida factor it is known that multigravida mothers are 1.021 times more likely to experience CED compared to primigravida mothers. This research is also supported by Setyo Dwi and Heri Sugiarto.[11] that there is correlation between education, age and gravity with CED incidence.

The study from Rahmat etc also found that the number of parities was not related to the incidence of CED in pregnant women with a P value = 0.968. Meanwhile, pregnancy spacing has a relationship with the incidence of CED in pregnant women with a P value of 0.000.(12)

CONCLUSION

There was a correlation between age and parity the incidence of CED in pregnant women in the work area of the Gaji Health Center in 2022. Health worker at the Salary Health Center, Kerek District, Tuban Regency hoped that it can improve the quality of services at the Gaji Community Health Center. Health workers provide education to mothers about nutrition during antenatal care (ANC). Pregnant women visit a midwife or doctor as early as possible to get standard pregnancy services so that they can detect complications that may occur during pregnancy and childbirth and to reduce the risks caused by CED in pregnant women. Researchers can then examine other variables that are thought to be risk factors for the occurrence of CED in pregnant women so that later they can help reduce the incidence of CED in mothers

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