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Factors Related To The Event Of Chronic Energy Lack (Kek) In Pregnant Women At Puskesmas Pematang Pansggang I Regency Of Ogan Komering Ilir (Oki) In 2021

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A R T I C L E I N F O

Keywords:

age,
parity,
occupational education,
chronic energy deficiency.

ABSTRACT

Chronic energy deficiency (CED) is a pregnant woman who has an upper arm circumference (LILA) < 23.5 cm. At Pematang Panggang I Health Center, pregnant women who experience Chronic energy deficiency (CED) in pregnancy in 2018 was 38 people, in 2019 it was reduced to 34 people, and in 2020 even more increased to 36 people. This study aims to determine the relationship between age, parity, education and occupation with the incidence of Chronic Energy Deficiency (KEK) in pregnant women. The method used is an analytical survey with a cross-sectional approach part. With a population of 503 pregnant women who experience a lack of energy chronicles (KEK) at Pematang Panggang I Health Center. Samples were taken using Slovin formula with random sampling technique as many as 224 samples. Research result shows that there is a relationship between age and the incidence of chronic energy deficiency in pregnant women (P = 0.002), there is a relationship between parity with the incidence of chronic energy deficiency in pregnant women (P = 0.039), there was a relationship between history of education with the incidence of chronic energy deficiency in pregnant women (P = 0.002), and there is no relationship between work and the incidence of chronic energy deficiency in pregnant women (P = 0.492). There is a relationship between age, parity and education with the incidence of chronic energy deficiency in pregnant women and there is no relationship between work and the incidence of chronic energy deficiency in pregnant women. Suggestion in the promotive-preventive efforts of chronic energy deficiency in pregnant women education is prioritized for at-risk groups

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1. Introduction

Chronic Energy Deficiency (KEK) is a health problem in the world, especially developing countries. Chronic Energy Deficiency occurs when the intake of energy, protein, or even both is inadequate to meet the body's needs. Chronic Energy Deficiency attacks women of childbearing age (WUS) aged 15-45 years. Chronic Energy Deficiency can also affect pregnant women who have risk factors for known CED [1].

According to the World Health Organization (WHO) in 2017, around 830 women die every day due to complications during pregnancy or childbirth. To reduce the global risk of death from 216.1 million live births in 2015 to 70 per 100,000 live births in 2030 [2]. The SDGs targets would require a global annual reduction rate to be achieved at least 7.5% which is more than three times the annual reduction rate achieved between 1990 and 2015 [3].

Based on data from routine reports in 2020 collected from 34 provinces, it shows that from 4,656,382 pregnant women whose upper arm circumference (LiLA) was measured, it was known that around 451,350 pregnant women had LilA < 23.5 cm (experiencing the risk of CED) [4]. From these calculations, it can be concluded that the percentage of pregnant women at risk of SEZ in 2020 is 9.7%, while the target for 2020 is 16%. This condition illustrates that the achievement of this year's SEZ target for pregnant women has exceeded the 2020 Ministry of Health Strategic Plan target [5]. If this achievement is compared with the threshold according to WHO, the percentage of pregnant women with SEZ in Indonesia is a mild category of public health problem (<10%) (Ministry of Health, 2020) [6].

Data from the Ogan Komering Ilir (OKI) District Health Service Profile (2020) for OKI District found that the proportion of pregnant women aged 15-49 years with LILA < 23.5 cm or at risk of KEK in Kab. OKI is 22.6% [7]. The prevalence of pregnant women suffering from SEZ in Kab. The OIC in 2020 is 9.11%. The prevalence of pregnant women with SEZ in OKI Regency during 2018 to 2020 has indeed decreased [8]. An initial survey conducted at the Pematang Panggang I Public Health Center conducted by observing medical records, MCH reports and monitoring of pregnant women, it was found that some pregnant women experienced chronic energy deficiency (KEK)[9].

From the results of these observations, it was found that in 2018 the number of pregnant women recorded in the MCH report was 495 people and 38 people experienced SEZ, in 2019 the number of pregnant women recorded in medical records was 506 people, 34 people experienced SEZ and in 2019 in 2020 the number of pregnant women recorded in the MCH report was 503 people and 36 people experienced SEZ [10].

Based on the above phenomenon, the researchers are interested in conducting research on "Factors Associated with Chronic Energy Deficiency (KEK) Incidences in Pregnant Women at Pematang Panggang I Public Health Center, Ogan Komering Ilir (OKI) Regency in 2021"..

2. Method

This study uses quantitative research using an analytic survey method with a cross sectional research design, the study was conducted from July to September 2021, the sample of this study was some pregnant women who were recorded in the ANC visit report at Pematang Panggang I Health Center 2020, the number of samples in this study is 224 people.

3. Results and Discussion

3.1 Research result

a. Univariate Analysis

TABLE 1
FREQUENCY DISTRIBUTION OF MOTHER'S AGE

Mother's Age Category	Frequency	Percentage
at risk	137	56.4
No Risk	87	43.6
Total	224	100.0

Based on table 1 above, it can be seen from 224 respondents. Pregnant women who have an age at risk (<20 and >35 years) are 137 respondents (56.4%) which is higher than pregnant women who do not have a risk age (20-35 years) which are 87 respondents (43.6%).

TABLE 2
MATERNAL PARITY FREQUENCY DISTRIBUTION

Mother's Parity Category	Frequency	Percentage
High Parity	189	81.9
Low Parity	35	18.1
Total	224	100.0

Based on Table 2, it can be concluded that the parity distribution of pregnant women experiencing CED with high parity category is 189 people (81.9%) and low parity is 35 people (18.1%).

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TABLE 3
FREQUENCY DISTRIBUTION OF MOTHER'S EDUCATION LEVEL (N=36)

Mother's Education Category	Frequency	Percentage
Low education	137	56.4
higher education	87	43.6
Total	224	100.0

Based on table 3, it can be concluded that the frequency distribution of the education level of pregnant women who experience SEZ with low education category is 137 people (56.4%) and higher education is 87 people (43.6%).

TABLE 4
FREQUENCY DISTRIBUTION OF MOTHER'S EDUCATION LEVEL (N=36)

Mother's Education Category	Frequency	Percentage
Doesn't work	70	32.4
Working	154	67.6
Total	224	100.0

b. Bivariate Analysis

TABLE 5
MATERNAL AGE RELATIONSHIP WITH CHRONIC ENERGY DEFICIENCY

Age	SEZ status						*p*- Value	OR
	Yes		No		Amount			
	n	%	n	%	N	%		
at risk	**31**	**86.1**	**106**	**56.4**	**137**	**100**	**0.002**	**4,796 (1,786-12,876)**
No Risk	**5**	**13.9**	**82**	**43.6**	**87**	**100**		
Total	**36**	**16.1**	**188**	**83.9**	**224**	**100**		

Based on table 5 above, it shows that the percentage of the incidence of KEK at risky age is 86.1%, which is greater than 13.9% at not at risk. The results of the analysis of the relationship between maternal age and Chronic Energy Deficiency using the chi square test obtained a p value of 0.002 < 0.05. Statistically, it can be said that the hypothesis in this study is accepted, meaning that there is a significant relationship between maternal age and the incidence of Chronic Energy Deficiency at Pematang Panggang 1 Public Health Center, Ogan Komering Ilir Regency. In addition, based on the results of the analysis, the Odds Ratio (OR) value is 4.796 and a confidence interval with a 95% confidence interval (CI) for mothers with Chronic Energy Deficiency with a value range of 1.786-12.876, which means that mothers in the risky age category are 5 times more at risk of experiencing low energy. Chronic.

TABLE 6
THE RELATIONSHIP OF MOTHER'S PARITY WITH CHRONIC ENERGY DEFICIENCY

parity	SEZ status						*p*- Value	OR
	Yes		No		Amount			
	n	%	n	%	n	%		
High Parity	35	97.2	154	81.9	189	100	0.039	7,727(1,023-58,377)
Low Parity	1	2.8	34	35	35	100		
Total	36	16.1	188	83.9	224	100		

Based on table 6 above, it shows that the percentage of occurrence of Chronic Energy Deficiency at high parity is 97.2% greater than at low parity of 2.8%. The results of the analysis of the relationship between maternal parity and chronic energy deficiency using the chi square test obtained a p value of 0.039 < 0.05. Statistically, it can be said that the hypothesis in this study is

accepted, meaning that there is a significant relationship between maternal parity and the incidence of chronic energy deficiency at Pematang Panggang 1 Public Health Center, Ogan Komering Ilir Regency. In addition, based on the results of the analysis, the Odds Ratio (OR) value was 7,727 and a confidence interval with a 95% confidence interval (CI) for mothers with chronic energy deficiency with a value range of 1,023-58.

TABLE 7
CONNECTION EDUCATIONAL LEVEL OF MOTHERS WITH CHRONIC ENERGY DEFICIENCY

Education	SEZ status						*p*- Value	OR
	Yes		No		Amount			
	n	%	n	%	n	%		
Low education	31	86.1	106	56.4	137	100	4,79	0.002 (1,780-
higher education	5	13.9	82	43.6	87	100	6	12,876)
Total	36	16.1	188	83.9	224	100		

Based on table 7 above, it shows that the percentage of Chronic Energy Deficiency in low education is 86.13% greater than in higher education, which is 13.9%. The results of the analysis of the relationship between maternal education and Chronic Energy Deficiency using the chi square test obtained a p value of 0.002 < 0.05. Statistically, it can be said that the hypothesis in this study is accepted, meaning that there is a significant relationship between maternal education and the incidence of chronic energy deficiency at Pematang Panggang 1 Public Health Center, Ogan Komering Ilir Regency. In addition, based on the results of the analysis, the Odds Ratio (OR) value was 4.796 and a confidence interval with a 95% confidence interval (CI) for mothers with chronic energy deficiency with a value range of 1.786-12.

TABLE 8
RELATIONSHIP BETWEEN MOTHER'S WORK AND CHRONIC ENERGY DEFICIENCY

Profession	CAKE STATUS						*p*- Value	OR
	YES		NO		TOTAL			
	n	%	n	%	N	%		
Doesn't work	9	25	61	32.4	70	100	0.4	0.694(0.308
Working	27	75	127	67.6	154	100	92	-1.566)
Total	36	16.1	188	83.9	224	100		

Based on table 5.9 above, it shows that the percentage of cases of Chronic Energy Deficiency in working mothers is 75.0% greater than that of mothers who do not work at 25.0%. The results of the analysis of the relationship between the level of mother's work and Chronic Energy Lack using the chi square test obtained a p value of 0.492 > 0.05. Statistically, it can be said that the hypothesis in this study was rejected, meaning that there was no significant relationship between the mother's level of work and the incidence of Chronic Energy Deficiency at Pematang Panggang 1 Public Health Center, Ogan Komering Ilir Regency. In addition, based on the results of the analysis, the Odds Ratio (OR) value is 0.694 and a confidence interval with a 95% confidence interval (CI) for mothers with chronic energy deficiency with a value range of 0.308-1,566, which means working mothers are only 0.

3.2 Discussion

a. Relationship between Age and Chronic Energy Deficiency

The results of the analysis of the relationship between maternal age and Chronic Energy Deficiency using the chi square test obtained a p value of 0.002 < 0.05. Statistically, it can be said that the hypothesis in this study is accepted, meaning that there is a relationship which means between maternal age and the incidence of Chronic Energy Deficiency at Pematang Panggang 1 Public Health Center, Ogan Komering Ilir Regency.

Based on the table above, it can be seen from 224 respondents. Pregnant women who have an age at risk (<20 and >35 years) are 137 respondents (56.4%) which is higher than pregnant women who do not have a risk age (20-35 years) which are 87 respondents (43.6%). Based on the table above, it shows that the percentage of the incidence of KEK in the at-risk age is 86.1%, which is greater than the non-risk age at 13.9%.The results of the analysis of the relationship between maternal age and Chronic Energy Deficiency using the chi square test obtained a p value of 0.002 < 0.05. Statistically, it can be said that the hypothesis in this study is accepted, meaning that there is a

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significant relationship between maternal age and the incidence of Chronic Energy Deficiency at Pematang Panggang 1 Public Health Center, Ogan Komering Ilir Regency. In addition, based on the results of the analysis, the Odds Ratio (OR) value is 4.796 and a confidence interval with a 95% confidence interval (CI) for mothers with Chronic Energy Deficiency with a value range of 1.786-12.876, which means that mothers in the risky age category are 5 times more at risk of experiencing low energy. Chronic.

From the results of this study, researchers assume that maternal age affects the incidence of chronic energy deficiency in pregnancy in pregnant women because mothers with pregnancies at the age of < 20 years and > 35 years will be at high risk for both mother and baby. At the age of <20 years, the reproductive organs of pregnant women are biologically immature, pregnant women are not prepared for their pregnancy so that pregnant women will be less concerned about maintaining their pregnancy. Meanwhile, over 35 years of age increases the risk of the mother having a pregnancy condition due to the decline in reproductive function and decreased endurance.

b. The lationship of Parity With Chronic Energy Deficiency

The results of the analysis of the relationship between maternal parity and chronic energy deficiency using the chi square test obtained a p value of 0.039 < 0.05. Statistically, it can be said that the hypothesis in this study is accepted, meaning that there is a significant relationship between maternal parity and the incidence of Chronic Energy Deficiency at Pematang Panggang 1 Public Health Center, Ogan Komering Ilir Regency.

Based on the table, it can be concluded that the parity distribution of pregnant women who experience CED with high parity category is 189 people (81.9%) and low parity is 35 people (18.1%). Based on the table above, it shows that the percentage of occurrence of Chronic Energy Deficiency at high parity is 97.2% greater than at low parity of 2.8%.

The results of the analysis of the relationship between maternal parity and chronic energy deficiency using the chi square test obtained a p value of 0.039 < 0.05. Statistically, it can be said that the hypothesis in this study is accepted, meaning that there is a significant relationship between maternal parity and the incidence of chronic energy deficiency at Pematang Panggang 1 Public Health Center, Ogan Komering Ilir Regency. In addition, based on the results of the analysis, the Odds Ratio (OR) value is 7.727 and a confidence interval with a 95% confidence interval (CI) for mothers with chronic energy deficiency with a value range of 1.023-58.377, which means mothers with high parity are 8 times more at risk of experiencing chronic energy deficiency. compared to mothers with low parity

This study is related to the incidence in Syakur et al's research (2020). Based on bivariate analysis, it is known that parity pregnant women who are at risk and who experience chronic energy deficiency are 73.9% and those who are not chronically deficient in energy are 26.1% while from parity who not at risk and who experience chronic energy deficiency are 28.9% and those who are not chronically energy deficient are 71.1% The results of statistical tests using the chis-quare test show that the value of x2 count (12.515%) > x2 table (3.841) or p value (0.000) < 0.05 this means that parity is associated with chronic energy deficiency.

According to the assumption of the researcher, respondents who have parity at risk are more likely to experience chronic energy deficiency than those without chronic energy deficiency. This happens because mothers are less concerned about the nutrition they consume because they have been pregnant and given birth several times, so it is likely that many disturbed health conditions will occur such as anemia and malnutrition

c. Relationship between Education and Chronic Energy Deficiency

The results of the analysis of the relationship between maternal education level and Chronic Energy Lack using the chi square test obtained a p-value of 0.002 > 0.05. Statistically, it can be said that the hypothesis in this study was rejected, meaning that there was no significant relationship between maternal education level and the incidence of Chronic Energy Deficiency at Pematang Panggang 1 Public Health Center, Ogan Komering Ilir Regency.

Based on Table 5.4, it can be concluded that the distribution of the education level of pregnant women experiencing SEZ with low education category is 137 people (56.4%) and higher education is 87 people (43.6%). Based on table 5.8 above, it shows that the percentage of Chronic Energy Deficiency in low education is 86.13% greater than in higher education, which is 13.9%.

The results of the analysis of the relationship between maternal education and Chronic Energy Deficiency using the chi square test obtained a p value of 0.002 < 0.05. Statistically, it can be said that

the hypothesis in this study is accepted, meaning that there is a significant relationship between maternal education and the incidence of chronic energy deficiency at Pematang Panggang 1 Public Health Center, Ogan Komering Ilir Regency. In addition, based on the results of the analysis, the Odds Ratio (OR) value is 4.796 and a confidence interval with a 95% confidence interval (CI) for mothers with chronic energy deficiency with a value range of 1.786-12.876, which means mothers with low education are 4 times more at risk of experiencing chronic energy deficiency. compared to mothers with higher education.

d. Relationship between Age and Chronic Energy Deficiency

The results of the analysis of the relationship between the level of mother's work and Chronic Energy Lack using the chi square test obtained a p value of 0.492 > 0.05. Statistically, it can be said that the hypothesis in this study was rejected, meaning that there was no significant relationship between the mother's level of work and the incidence of Chronic Energy Deficiency at Pematang Panggang 1 Public Health Center, Ogan Komering Ilir Regency.

Based on the table, it can be concluded that the distribution of the work frequency of pregnant women who experience SEZ with the category of not working as many as 70 people (32.4%) and working as many as 154 people (67.6%). Based on the table above, it shows that the percentage of cases of Chronic Energy Deficiency in working mothers is 75.0% greater than that of mothers who do not work at 25.0%.

The results of the analysis of the relationship between mother's work and chronic energy deficiency using the chi square test obtained a p value of 0.492 > 0.05. Statistically, it can be said that the hypothesis in this study was rejected, meaning that there was no significant relationship between the mother's level of work and the incidence of Chronic Energy Deficiency at Pematang Panggang 1 Public Health Center, Ogan Komering Ilir Regency. In addition, based on the results of the analysis, the Odds Ratio (OR) value is 0.694 and a confidence interval with a 95% confidence interval (CI) for mothers with Chronic Energy Deficiency with a value range of 0.308-1,566, which means that working mothers are only 0.7 times more at risk of experiencing Chronic Energy Deficiency. compared to mothers who do not work

4. Conclusion

There is a partial relationship between age, parity, education, and occupation with the incidence of chronic energy deficiency in pregnant women at Pematang Panggang 1 Public Health Center, Ogan Komering Ilir Regency in 2021.

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