FACTORS ASSOCIATED WITH THE INCIDENCE OF CHRONIC LACK OF ENERGY (SEZ) IN PREGNANT WOMEN AT THE PAAL X HEALTH CENTER JAMBI CITY

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ABSTRACT

***Background**: The incidence of Chronic Energy Deficiency (SEZ) tends to increase every year according to data from the Jambi City Health Office in 2018 showing chronic Lack of Energy (SEZ) pregnant women which is 6% of 11,581 pregnant women and in 2019 increased by 7% of mothers from 11,680 pregnant women. SEZ has an impact on increasing the risk of anemia, bleeding, infection, the risk of prolonged labor and prematurity.*
***Method**: Observational study with cross sectional design at Puskesmas Paal X Jambi City. Aims to determine the factors associated with the incidence of Chronic Energy Deficiency (SEZ) in pregnant women. The population of all pregnant women who carry out pregnancy checks is 164 people. The sample was taken by quota sampling of 61 people. Data collection using questionnaires. Univariate and bivariate analysis of chi-square tests.*
***Results:** As many as 36.1% of SEZ pregnant women. There is a relationship between education level (p = 0.015), knowledge (p = 0.032), occupation (p = 0.045) with the incidence of SEZ. There was no relationship between age (p = 0.775), and income (p = 0.276) with the incidence of SEZ.*
***Conclusion:** Some factors related to the incidence of SEZ in pregnant women are education, knowledge and employment. It is expected that health workers will improve the program for handling SEZ pregnant women through counseling on nutritional needs and conducting early detection of factors that cause SEZ in pregnant women.*

***Keywords:** Chronic Lack of Energy, pregnant mother*

INTRODUCTION

Chronic Lack of Energy (SEZ) is a condition where a pregnant woman suffers from a lack of food intake that lasts for a long time (chronic or chronic) which results in health problems, so that increased nutritional needs during pregnancy cannot be met.(1)

Basic Health Research (Riskesdas) Indonesia reported the proportion of chronic lack of energy (SEZ) in pregnant women in 2013 the age group of pregnant women at risk of 15-19 years was 38.5%, at the reproductive age the incidence of SEZ in pregnant women was 24.1% and at the age of >35 years the incidence of SEZ was 18.5% while in 2018 in the age group of mothers at risk of 15-19 years was 33.5%, at reproductive age the incidence of SEZ in pregnant women is 17.4% and at the age of >35 years SEZ is 8.7%. It can be concluded that the most risky SEZ incidence in pregnant women in terms of age is the age of 15-19 years.(2)

Based on data from the Jambi City Health Office in 2018, the number of pregnant women with SEZ (chronic lack of energy) was 6% of pregnant women with SEZ (chronic lack of energy) from 11,581 pregnant women and in 2019 it was 7% of pregnant women with SEZ (chronic lack of energy) from 11,680 pregnant women. The highest number of SEZ pregnant women in 2018 was found at the Paal X Jambi City Health Center, which was 11% pregnant women with SEZs from 615 pregnant women, while in 2019 the highest number of SEZ pregnant women was still found at the Paal X Jambi City Health Center, which increased to 15% of pregnant women with SEZs from 546 pregnant women.(3,4)

The impact of chronic lack of energy (SEZ) on mothers includes increasing the risk of anemia, bleeding, and infectious diseases. The impact of Chronic Lack of Energy (SEZ) on the labor process will include the risk of prolonged labor, premature labor, and labor with surgery tends to increase. The impact of Chronic Lack of Energy (SEZ) on the fetus in the womb is the occurrence of stunted fetal growth process, miscarriage or abortion, stillbirth, neonatal death, congenital defects, anemia in infants, intrapartum asphyxia (death in the womb), birth with low birth weight [5]

METHOD

This study is an observational study with a *cross-sectional* design with the aim of determining the factors associated with the incidence of chronic lack of energy (SEZ) in pregnant women at the Paal X Health Center in 2021. This study was conducted in January-July 2021. The population of this study was all pregnant women who carried out pregnancy checks in April-June 2021 at the Paal X Health Center in Jambi City and the sample of this study was pregnant women selected with the quota sampling technique. The study was conducted using questionnaires. Data analysis used univariate and bivariate with *chi-square statistical test.*

RESULTS AND DISCUSSION

The results of the study found that from 61 respondents (100%) studied, the characteristics of SEZ incidence in respondents with SEZ category were 22 people (36.1%) and non-SEZ category as many as 39 people (63.9%), age characteristics were known to be at risk category as many as 14 people (23.0%) and age not at risk as many as 47 people (77.0%), income characteristics were known to be low category as many as 29 people (47.5%) and income of respondents with high category as many as 32 people (52.5%), The characteristics of the education level are known to be in the low category as many as 20 people (32.8%) and the level of education in the high category as many as 41 people (67.2%), the characteristics of knowledge are known to be in the less category as many as 28 people (45.9%), the sufficient category is 23 people (37.7%) and the knowledge of the good category is 10 people (16.4%) and the characteristics of work are known to be 17 people (27.9%) and with the category of not working as many as 44 people (72.1%).

Table 1 Frequency Distribution of Chronic Energy Deficiency (SEZ), Age, Income, Education Level, Knowledge, and Employment in Pregnant Women at Paal X Health Center Jambi City

Variable		Sum	
		f	%
SEZ Incidence in Pregnant Women	CAKE	22	36,1
	No SEZ	39	63,9
Age	Risk	14	23,0
	No Risk	47	77,0
Income	Low	29	47,5
	Tall	32	52,5
Education Level	Low	20	32,8
	Tall	41	67,2
Knowledge	Less	28	45,9
	Enough	23	37,7
	Good	10	16,4
Work	Not Working	44	72,1
	Work	17	27,9

Table 2 The Relationship between Age and the Incidence of Chronic Energy Deficiency (SEZ) in Pregnant Women at Paal X Health Center Jambi City

Age	Chronic Lack of Energy (SEZ) in Pregnant Women				Sum		P-Value
	CAKE		No SEZ				
	f	%	*f*	%	*f*	%	
Risky	6	9.8	8	13,1	14	23,0	
No Risk	16	26,2	31	50.8	47	77,0	0,775
Total	32	36,1	39	63,9	61	100,0	

The results of the analysis of the relationship between age and Chronic Energy Deficiency (SEZ) in pregnant women obtained a risk age of 6 people

(9.8%) who experienced SEZ and as many as 8 people (13.1%) who did not experience SEZ from 14 people (23.0%) pregnant women with risk age while the age that was not at risk as many as 16 people (26.2%) who experienced SEZ and as many as 31 people (50.8%) who did not experience SEZ from 47 people (77.0%) pregnant women with age not at risk. Based on the results of the chi-square statistical test, a p-value of 0.775 (p>0.05) was obtained so that there was no relationship between the age of respondents and the incidence of Chronic Energy Deficiency (SEZ) in pregnant women at the Paal X Health Center in Jambi City in 2021, this happened because the age of most respondents was at the age of 20-35 years, which is the best age for pregnant women.

Pregnant women who are too young or still teenagers tend to have less weight than normal and experience less weight gain during pregnancy. In addition, the teenager's body is generally not ready or perfect to undergo pregnancy. As for old age, it needs a lot of energy also because the function of organs is getting weaker, it requires additional energy that is enough to support the ongoing pregnancy

The results of this study are in line with research [7] on factors that influence the occurrence of chronic energy deficiency in pregnant women at the Pegayut Health Center in South Sumatra, the results showed that there were 20 respondents (6.2%) who experienced SEZ and 305 respondents (93.8%) who did not experience SEZ from a total of 325 respondents who had a non-ideal age. The results of the chi-square statistical test obtained a value of p-value = 0.490, it can be concluded statistically at 0.05 there is no significant relationship between the age of pregnant women and the incidence of chronic energy deficiency (SEZ) in Puskemas Pegayut South Sumatra.

According to the researchers' assumptions, based on the results of the study, it is known that mothers with no risk age experience SEZs more than pregnant women with at-risk age. This suggests that age has no significant relationship with SEZ incidence. However, the incidence of SEZ can occur through several things such as the condition of family income, and how mothers meet their nutritional needs during pregnancy.

In this study, the income level is categorized into two, namely low if family income < 2,630,162 / month and high if income > 2,630,162 / month. Univariate results showed that 47.5% of families had low incomes, and the remaining 52.5% had high incomes. Based on the results of bivariate analysis using the chi-square test, results were obtained that showed that there was no relationship between income and the incidence of SEZ in pregnant women at the Paal X Health Center in Jambi City, with a p-value = 0.276 (p>0.05).

Table 3 The Relationship of Income with the Incidence of Chronic Energy Deficiency (SEZ) in Pregnant Women at Paal X Health Center Jambi City

Income	Chronic Lack of Energy (SEZ) in Pregnant Women				Sum		P-Value
	CAKE		No SEZ				
	f	%	*f*	%	*f*	%	
Low	13	21,3	16	26,2	29	47,5	
Tall	9	14,8	23	37,7	32	52,5	0,276
Total	22	36,1	39	63,9	61	100,0	

Family economic income greatly influences the choice of food consumed daily. Someone with a high economy then gets pregnant, then most likely the nutrition needed will be fulfilled, plus the examination requires a good maternal state and cannot be separated from the nutritional condition of the pregnant woman.[8]

The results of this study are in line with research [9] on the analysis of factors related to the incidence of chronic energy deficiency (SEZ) in pregnant women at the Kalitanjung Cirebon Health Center. The results showed that there was no significant relationship between respondents' income and the incidence of SEZ in pregnant women, with p-value = 0.156 (p>0.05).

According to the researchers' assumptions, based on the results of the study, it is known that the majority of mothers have a good income, but there are still mothers who experience SEZ. This

study also found mothers who have low income with the occurrence of SEZ in pregnant women. It is known that a low level of income will affect the need for less nutritional intake during pregnancy. So that mothers with low income are likely to reduce the quality of their nutritional intake such as protein, carbohydrates, fat obtained from food sources. The level of income affects the nutritional needs of pregnant women, namely the nutritional needs obtained are not met properly. Mothers with less economic status usually struggle in providing nutritious food. Good nutritional status of pregnant women can affect fetal growth, with good nutritional status later the mother will give birth to a normal, healthy baby not easily affected by disease than mothers with less social and economic status, namely pregnant women with nutritional status less likely to give birth to BBLR babies and experience the risk of death.

In this study, the level of education is categorized into two, namely low if the level of education taken by elementary - junior high school and high if the level of education taken by high school - college. Univariate results showed that there were 32.8% of respondents with elementary - junior high school education, and the remaining 67.2% respondents with high school - college education. Based on the results of bivariate analysis using the chi-square test, results were obtained that showed that there was a relationship between the level of education and the incidence of SEZs in pregnant women at the Paal X Health Center in Jambi City, with a p-value = 0.015 (p<0.05).

Table 4 The Relationship Between Education Level and the Incidence of Chronic Energy Deficiency (SEZ) in Pregnant Women at Paal X Health Center Jambi City

Education Level	Chronic Lack of Energy (SEZ) in Pregnant Women				Sum		P-Value
	CAKE		No SEZ				
	f	%	*f*	%	*f*	%	
Low	12	19,7	8	13,1	20	32,8	
Tall	10	14,8	31	37,7	41	67,2	0,015
Total	22	36,1	39	63,9	61	100,0	

Education is the process of educating or carrying out an activity that contains an educational communication process between the educating and the educated. Through inputs to students that will be consciously digested by the soul, mind and body so that knowledge (cognitive), skills (psychomotor), and attitudes (affective) are in accordance with what the education aims for.[10]

The purpose of education is to create someone who is qualified and has character so that he has a broad foresight to achieve an expected goal and is able to adapt quickly and appropriately in various environments. Because education itself motivates ourselves to be better in all aspects of life .[10]

The results of this study are in line with research [11] on the relationship between economic status and education level with the incidence of SEZ for pregnant women at the Talang Banjar Health Center in Jambi City. The results showed that out of 60 respondents, 19 respondents (76%) experienced SEZs from 25 respondents with higher education levels and 16 respondents experienced SEZs (45.7%) from 35 respondents with low education levels. The results of the chi square statistical test obtained a p-value of 0.018 (p<0.05) which means that there is a significant relationship between the level of education and the incidence of SEZ in pregnant women.

According to the researchers' assumptions based on the results of the study, it is known that mothers with low education experience more Chronic Energy Deficiency (SEZ) because mothers do not understand the nutritional content contained in each food, how much is needed during pregnancy, and how to process food so that the nutritional value of food is reduced or even lost and sometimes mothers only consume the same foods or only foods that pregnant women want with important assumptions want to eat, so that the nutritional and nutritional needs are not met and cause the mother to experience Chronic Energy Deficiency (SEZ).

In this study, knowledge is categorized into three, namely less if the answer is correct <56%, enough if the correct answer is 56% - 75%, and good if the answer is correct 76% - 100%. Univariate results showed that there were 45.9% of respondents with insufficient category knowledge, and as many as 37.7% of respondents with sufficient category knowledge, and as many as 16.4% of respondents with good category knowledge. Based on the results of bivariate analysis using the chi-square test, results were obtained that showed that there was a relationship between knowledge and the incidence of SEZs in pregnant women at the Paal X Health Center in Jambi City, with a p-value = 0.032 (p<0.05).

Table 5 Knowledge Relationship with Chronic Energy Deficiency (SEZ) in Pregnant Women at Paal X Health Center Jambi City

Knowledge	Chronic Lack of Energy (SEZ) in Pregnant Women				Sum		P-Value
	CAKE		No SEZ				
	f	%	*f*	%	*f*	%	
Less	15	24,6	13	21,3	28	45,9	
Enough	5	8,2	18	29,5	23	37,7	0,032
Good	2	3,3	8	13,1	10	16,4	
Total	22	36,1	39	63,9	61	100,0	

Knowledge is the result of "knowing" and this happens after people have made an idea of a particular object. In general, a person's knowledge is influenced by the level of education, a low level of education leads to a person's ability to understand information. Good knowledge of a person because the education taken by a person is quite high. An educated person will be able to think about a problem including knowledge about chronic Energy Deficiency (SEZ).[12]

The results of this study are in line with research [13] on the relationship of knowledge, employment status and family income with the incidence of Chronic Energy Deficiency (SEZ) in pregnant women in the working area of the Pelaihari Health Center, Tanah Laut Regency. The results showed that respondents who had good knowledge as much as 58.5%, sufficient knowledge 41.5% and knowledge less 0%. The results of the chi square statistical test obtained a p-value of 0.003 (p<0.05), which means that there is a significant relationship between knowledge and the incidence of Chronic Energy Deficiency (SEZ) in pregnant women.

According to the researchers' assumptions, respondents who have sufficient and good category knowledge are only a few who experience Chronic Energy Deficiency (SEZ) compared to respondents who have less category knowledge due to the lack of information they receive about nutritional needs for pregnant women. Generally, respondents argue that Chronic Energy Deficiency (SEZ) is a condition where pregnant women experience a lack of vitamin intake is caused by many respondents who do not know what is meant by Chronic Energy Deficiency (SEZ). Respondents also argued that SEZ is caused by lack of sleep patterns which have an impact on health conditions to be less healthy so that body weight becomes thin.

Table 6 Work Relationship with Chronic Energy Deficiency (SEZ) in Pregnant Women at Paal X Health Center Jambi City

Work	Chronic Lack of Energy (SEZ) in Pregnant Women				Sum		P-Value
	CAKE		No SEZ				
	f	%	*f*	%	*f*	%	
Working	10	16,4	7	11,5	17	27,9	
Not working	12	19,7	32	52,5	44	72,1	0,045
Total	22	36,1	39	63,9	61	100,0	

In this study, work is categorized into two, namely not working and working. Univariate results showed that there were 72.1% of respondents with the non-working category, and the remaining 27.9% of respondents with the working category. Based on the results of bivariate analysis using the chi-square test, results were

obtained that showed that there was a relationship between work and the incidence of SEZs in pregnant women at the Paal X Health Center in Jambi City, with a p-value = 0.045 (p<0.05).

A person's work and activities vary. Someone with automatic active motion requires greater energy than those who just sit still. The more work done, the more energy required.[14]

The results of this study are in line with research [15] on the relationship between age and employment status of mothers with the incidence of Chronic Energy Deficiency (SEZ) in pregnant women in Puskemas Gabus I Pati Regency. The results showed that there was mostly a group of mothers who did not work or move as housewives. The results of the chi square statistical test obtained a p-value of 0.012 (p<0.05) and a prevalence ratio value of 9.286, which means that there is a relationship between work and the incidence of Chronic Energy Deficiency (SEZ) in pregnant women and pregnant women who do not work have a risk of experiencing SEZ 9.286 times compared to working pregnant women.

According to the assumption of researchers, it is known from the results of the study that the number of pregnant women who do not work is more than the number of pregnant women who work, the incidence of SEZ occurs a lot among pregnant women who do not work because of the low income situation caused by mothers who do not work then do not have additional income for the family so that if it is supported by low husband income resulting in a rate of low family income, but in the results of this study there is no relationship between income and the incidence of SEZ in pregnant women, it is still seen that SEZ pregnant women are also found in mothers who have low family income.

CONCLUSION

Some factors related to the incidence of SEZ in pregnant women are education, knowledge and work. It is expected that health workers will improve the program for handling SEZ pregnant women through counseling on nutritional needs and conducting early detection of factors that cause SEZ in pregnant women.

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