Jurnal Healthsains
Printed ISSN: 2722-7782
Electronic ISSN:2722-5356
jurnal.healthsains.co.id

DIET, PREGNANCY DISTANCE, AND AGE AT MARRIAGE WITH CHRONIC ENERGY DEFICIENCY (KEK) IN PREGNANT WOMEN

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Keywords:
Diabetes mellitus; Smoker; Ankle Brachial Pressure Index.

ABSTRACT
Kronic energy deficiency (kekurangan energy kronis/KEK) is condition someone that suffer food shortage regularly (Chronic) marked humerus (LILA) <23,5 cm with the result that appearing health problems. Prevalence of chronic energy deficiency (KEK) in expectant mother at year 2013 nationally is 24,2% and decrease be 17,3% at years 2018 based Riskesda data 2018. This research have urpose to know relationship nourishment system, Spacing pregnancy, and marriageable age toward chronic energy deficiency (KEK) at Puskesmas Tongauna Utara occupation area in years 2021. This research as analistical observation research by approach "Cross Sectional Study" And have conducted in date 29 March-03 at Puskesmas Tongauna Utara occupation area. Sample in the research is 49 expectant mother. This research using "total sampling technique" is technique taking sample same with population. Then, this research using "Pearson Correlation" statistics test. The result of this research show that expectant mother which have goodn ourishment system is 51,0%, then have not nourishment system enough is 49,0%, expectant mother that have spacing high risk pregnancy is 16,3% then, that have not risk to pregnancy is 83,7%. The expectant mother have risk to marriageable age is 12,2% then, the expectant mother have not risk to marriageable age is 87,8%. The result of try out using spearmen correlation show that there is not relationship nourishment system toward expectant mother KEK (P = 0,376), spacing pregnancy toward expectant mother KEK (P = 0,4420), marriageable age toward expectant mother KEK (P = 0,165).

Info Artikel
Artikel masuk 02 March 2023, Direvisi 11 March 2023, Diterima 23 March 2023

INTRODUCTION

Chronic energy deficiency (CED) is a condition of a person who suffers from chronic food shortages which is characterized by an upper arm circumference (LILA)

How to cite: Petrus, Rofiqoh, Anisa Fadila, (2023) Diet, Pregnancy Distance, and Age at Marriage with Chronic Energy Deficiency (KEK) in Pregnant Women, *Journal Health Sains 4*(2).
https://doi.org/10.46799/jhs.v4i3.856
E-ISSN: 2722-5356
Published by: Ridwan Institute

<23.5 cm, resulting in health problems. Chronic Energy Deficiency (CED) can occur in women of childbearing age and pregnant women (Ananda et al., 2022).

The incidence of anemia in young women in the Prevalence of Chronic Energy Deficiency (KEK) among pregnant women in 2013 nationally was 24.2% and decreased to 17.3% (Kemenkes, 2018). According to Southeast Sulawesi Health Profile data, the prevalence of Chronic Energy Deficiency (KEK) in pregnant women in 2013 was 23.5% and the prevalence in Konawe district was 5.7% (Riset Kesehatan Dasar (Riskesdas), 2018). Meanwhile, according to data from the North Tongauna Health Center, the prevalence of pregnant women in 2019 suffering from Chronic Energy Deficiency (KEK)

The main cause of CED in pregnant women is that since before pregnancy the mother has experienced a lack of energy, because the needs of pregnant people are higher than mothers who are not pregnant (Dukhi, 2020). Pregnancy causes an increase in energy metabolism, therefore the need for energy and other nutrients increases during pregnancy (Fatikasari et al., 2022).

There are several causes that affect the mother's need for nutrients that are not met, namely due to insufficient food intake and infectious diseases, pregnant women who have sufficient food intake but suffer from illness will experience malnutrition and pregnant women whose food intake is insufficient then the immune system will weaken and will be susceptible to disease, low education level, mother's knowledge about malnutrition, inadequate family income, mother's age less than 20 years or more than 35 years so that it affects her nutritional needs, parity of mothers who are high or too frequent pregnancies can deplete the body's nutritional reserves, spacing that is too close causes the mother not to have the opportunity to repair her body after giving birth, working pregnant women need more energy because their energy reserves are shared between herself and the fetus (Afifah et al., 2022).

METHOD

This research is an analytical observational study with a cross sectional study approach using SPSS data to analyze the relationship between diet, gestational age, and age at marriage with chronic energy deficiency (KEK) in pregnant women. The study population was all pregnant women who were in the working area of the North Tongauna Community Health Center, Konawe Regency, namely 49 people. The sample in this study was taken by total sampling.

The dependent variable in this study is chronic energy deficiency (CED) in pregnant women. The independent variables are diet, pregnancy interval, and age at marriage. The analysis in this study was divided into 2, namely univariate and bivariate analysis. Univariate analysis can be presented in the form of a sample distribution, which in this study describes the characteristics of diet, gestational age, age at marriage, and also chronic energy deficiency (KEK) in pregnant women.

RESULTS AND DISCUSSION
RESULTS

Univariate Analysis
KEK in Pregnant Women

Table 1. Sample Distribution Based on KEK in Pregnant Women

Chronic Energy Deficiency	Frequency	Percentage (%)
KEK	13	26.5
No KEK	36	73.5
Total	49	100

Based on Table 1, it can be seen that there are 13 pregnant women with CED (26.5%), while there are 36 pregnant women without CED (73.5%).

Dietary habit

Table 2. Based on sample distribution Dietary habit

Pola Makan	Frequency	Percentage (%)
Good	25	51.0
Not Enough	24	49.0
Total	49	100.0

Based on Table 2, it can be seen that the diet of pregnant women is good, namely 25 people (51.0%) and those who are lacking, namely 24 people (49.0%)

Pregnancy Distance

Table 3. Sample Distribution Based on Pregnancy Distance

Pregnancy Distance	Frequency	Percentage (%)
Normal	41	83.7
Abnormal	8	16.3
Total	49	100.0

Based on Table 3, it can be seen that the normal pregnancy interval for pregnant women is 41 people (83.7%) and abnormal is 8 people (16.3%).

Married Age

Table 4. Based on sample distribution Married Age

Age Married	Frequency	Percentage
Normal	43	87.7
Abnormal	6	12.2
Total	49	100.0

Based on Table 4, it can be seen that the age of marriage for pregnant women is normal, namely 43 people (87.7%) and not normal, namely 6 people (12.2%).

BIVARIATE ANALYSIS

Table 5. Relationship between diet and KEK in pregnant women

Dietary habit	Chronic Energy Deficiency				Total		P Value
	KEK		Not KEK				
	n	%	n	%	n	%	
Good	8	32.0%	17	68.0%	25	100.0%	r = 0,126
Not Enough	5	20.8%	19	79.2%	24	100.0%	p = 0,387
Total	13	26.5%	36	73.5%	49	100.0%	

Table 5 shows that most of the samples had a good diet and their prevalence of CED was higher, namely 32.0%, compared to pregnant women who had a poor diet. The correlation value obtained was 0.126 in the range "0.00 - 0.199", which means that the relationship between diet and CED in pregnant women is at a very low level and not significant (p = 0.387 > 0.05).

Table 6. Relationship between Pregnancy Spacing and KEK in Pregnant Women

Dietary habit	Chronic Energy Deficiency				Total		P Value
	KEK		Not KEK				
	n	%	n	%	n	%	
Good	10	24.4%	31	75.6%	41	100.0%	r = 0,110
Not Enough	3	37.5%	5	62.5%	8	100.0%	p = 0,453
Total	13	26.5%	36	73.5%	49	100.0%	

Table 6 shows that most of the samples had a normal spacing of pregnancies and their prevalence of Not KEK was higher, namely 75.6% compared to pregnant women who had an abnormal spacing of pregnancies. The correlation value obtained was 0.110 in the range "0.00 - 0.199", which means that the relationship between diet and CED in pregnant women is at a very low level and not significant (p = 0.453 > 0.05).

Table 7. Relationship between Age of Marriage and KEK in Pregnant Women

Dietary habit	Chronic Energy Deficiency				Total		P Value
	KEK		Not KEK				
	n	%	n	%	n	%	
Good	10	23.3%	33	76.7%	43	100.0%	r = 0,199
Not Enough	3	50.0%	3	50.0%	6	100.0%	p = 0,171
Total	13	26.5%	36	73.5%	49	100.0%	

Table 7 shows that most of the samples were of normal marriage age and their prevalence of Not KEK was higher, namely 76.7% compared to pregnant women who had abnormally spaced pregnancies. The correlation value obtained was 0.199 in the range "0.00 - 0.199", which means that the relationship between diet and CED in pregnant women is at a very low level and not significant (p = 0.171 > 0.05).

DISCUSSION

The Relationship between Diet and KEK in Pregnant Women

The results of the study stated that there was no relationship between diet and KEK in pregnant women at the North Tongauna Health Center in 2021, this was proven by the results of the Correlation test, the value of r = 0.126 was in the range "0.00-0.199", which means that the relationship is very low and p value = 0.387 > 0.05. The results of

this study are in accordance with which states that there is no relationship between diet and the incidence of chronic energy deficiency in pregnant women. The results of the correlation test analysis using the correlation test show a value of P = 0.629 > 0.05 (Nurvembrianti et al., 2021).

The diet must be able to include the amount or portion of food, the type of food, and the frequency of eating a person. The amount of food, namely the amount of food eaten or drunk is calculated to get a quantitative picture of the intake of certain nutrients. Types of food, namely food ingredients that are processed, prepared, and served which are divided into staple food groups, side dishes group, vegetable group, and dessert fruit group Food frequency, namely the level of frequency of consuming a certain amount of food ingredients or processed food during a certain period such as day, week, month, and year. Food frequency describes food consumption patterns qualitatively (Fauzan et al., 2021).

The relationship between pregnancy spacing and KEK in pregnant women

The results of the study stated that there was no relationship between pregnancy spacing and KEK in pregnant women at the North Tongauna Health Center in 2021, this was proven by the results of the Correlation test, the value of r = 0.110 was in the range "0.00-0.199", which means that the relationship is very low and p value = 0.453 > 0.05. Pregnant women whose pregnancies are less than two years apart have a risk of developing CED compared to pregnant women whose pregnancies are more than 2 years apart (Achmad, 2010).

Pregnancy spacing that is too close <2 years will cause low quality of the fetus or child and will also be detrimental to the mother's health the research sample was determined by purposive sampling technique (Dewi et al., 2022). Pregnancy spacing that is too close will cause the mother not to get the opportunity to repair her own body where the mother needs enough energy to recover after giving birth to her child. The mother is also still breastfeeding and must meet nutritional needs during breastfeeding, where while breastfeeding the mother needs additional calories every day to fulfill her nutrition and milk production, getting pregnant again will cause nutritional problems for the mother and the fetus or the baby she is carrying (Retnaningtyas et al., 2022).

The results of this study are in line with the results of research conducted with the title analysis of risk factors for chronic energy deficiency for pregnant women in Parepare City which shows that the results of the analysis of the variable distance between pregnancies and KEK pregnant women have no significant relationship between distance pregnancies with CED conditions for pregnant women with a value of P = 0.488 > 0.05 (Apriliani et al., 2019).

Relationship between age of marriage and KEK in pregnant women

The results of the study stated that there was no relationship between the age of marriage and KEK in pregnant women at the North Tongauna Health Center in 2021, this was proven by the results of the Correlation test, the value of r = 0.199 was in the range "0.00-0.199", which means that the relationship is very low and p value = 0.171 > 0.05. The results of this study are in accordance with the results of Hafifah Wijayanti's research (2016) which states that there is no relationship between age and CED pregnant women, this occurs because most respondents are aged 20-35 years, which is the best age.

The reproductive age of women is classified into two, namely age at risk and not at risk. Age is not at risk from 20 years to 35 years while at risk is under 20 years and

above 35 years. Giving birth at a young or too old age results in low quality of the fetus/child and will also be detrimental to the mother's health. In a mother who is too young (less than 20 years old) food competency can occur between the fetus and the mother herself who is still in its infancy.

According to the Indonesian Ministry of Health, the age of mothers who are at risk of giving birth to small babies is less than 20 years and above 35 years (Sukamto, 2022). Pregnant women who are too young are not only at risk of CED but also affected by the health of other mothers. Because at less than 20 years of age, food (nutritional) competence can occur between the fetus and the mother herself and is still growing and there are still hormonal changes that occur during pregnancy. whereas at the age of more than 35 years the ability of the mother's body to absorb the nutrients needed by the body of the mother and fetus decreases. However, in women who are over 35 years of age, in addition to increased maternal risk, the risk of death and birth defects is higher compared to 20-35 years (Hakim, 2021). The risk of pregnancy at an old age is almost the same as at a young gestational age, it's just that physical maturity is owned so there are some risks that will be reduced, decreasing the risk of fetal defects caused by folic acid. The risk of abnormalities in the location of the fetus is reduced because the mother's uterus is mature. The danger threatens precisely related to the reproductive organs over the age of 35 years which have decreased so that it can lead to bleeding during childbirth and preeclampsia (Ekayanthi & Suryani, 2019).

CONCLUSION

Based on the results of research conducted on 49 pregnant women in the working area of the North Tongauna Health Center in 2021, it can be concluded that: Pregnant women who have a good diet, namely 51.0%, Pregnant women who have abnormal pregnancy spacing, namely 83.7%. Pregnant women who have an abnormal marriage age, namely 87.7%. There is no relationship between diet and Chronic Energy Deficiency (KEK) in pregnant women. There is no relationship between pregnancy spacing and Chronic Energy Deficiency (KEK) in pregnant women. There is no relationship between age of marriage and Chronic Energy Deficiency (KEK) in pregnant women.

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