ANALYSIS OF NUTRITION CONSUMPTION LEVEL AND KNOWLEDGE WITH THE INCIDENCE OF CHRONIC ENERGY DEFICIENCY (CED) IN PROSPECTIVE BRIDES AT SIULAK GEDANG PUBLIC HEALTH CENTER, SIULAK, DISTRICT, KERINCI REGENCY

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ABSTRACT
Chronic energy deficiency (CED) is a lack of energy intake that has been going on for a long time. Preconception is the period when WUS before pregnancy. Prospective brides are the right preconception period to be able to prepare for pregnancy. In addition, women of childbearing age who suffer from CED have a risk of giving birth to children with CED later in life, causing health problems such as morbidity, mortality and disability. In conditions like this, a study was conducted on prospective brides who were going to face pregnancy and looking for factors that caused CED at the Siulak Gedang Health Center, Siulak District, Kerinci Regency.This study aims to determine the relationship between the level of consumption and nutritional knowledge with the incidence of CED in prospective brides. The research method used is observational analytic using a cross-sectional approach. The population in the study were prospective brides and grooms who registered in August 2020. The sampling technique used the accidental sampling method with 33 respondents.The results of the research analysis showed that there was a relationship between age, education, occupation, knowledge, level of consumption and CED in prospective brides and grooms. Suggestions given to prospective brides and grooms are recommended to improve food consumption by consuming food sources of carbohydrates, protein and fat sufficiently according to needs.

Keywords: KEK, consumption level, characteristics, knowledge

INTRODUCTION

The premarital period is associated with the preconception period because after marriage women will undergo the conception process. The preconception period is the period before pregnancy. Women of childbearing age (WUS) as prospective mothers are a vulnerable group whose health status must be considered,

especially their nutritional status. The quality of the next generation is determined by the condition of the mother before pregnancy and during pregnancy. Women aged 20-35 are the most appropriate age to prevent nutritional problems, especially chronic energy deficiency. Preconception nutritional status will affect the condition of pregnancy and the well-being of the baby which will be better if done before pregnancy. Perfect nutritional requirements during the preconception period are the key to the birth of a normal and healthy baby (Susilowati et al. 2016).

The adequacy of maternal nutrition during pregnancy is closely related to the condition of the baby being born. The most critical period of pregnancy is the third trimester, namely when the fetus is six months old, the fetus will grow very quickly. This can be seen from the mother's weight gain which is getting faster when entering the second trimester of pregnancy. In addition, fetal brain growth during pregnancy is also greatly influenced by the mother's nutritional status. Brain cell growth begins at the age of twenty weeks or five months, if there is malnutrition in the mother, the number of brain cells formed cannot reach the amount it should (Ahmadi, 2019). Optimal nutrition in premarital women will affect the growth and development of the fetus and the health condition of the baby born and safety during the birth process. The importance of maintaining adequate nutrition for premarital women is because good nutrition will support the optimal function of the reproductive organs such as smooth egg maturation, production of good quality eggs, and a perfect fertilization process. Good nutrition can also play an important role in providing nutritional reserves for fetal growth and development. For prospective mothers, adequate and balanced nutrition will affect overall health conditions during conception and pregnancy and will be able to break the chain of malnutrition problems during pregnancy (Susilowati et al. 2016).

Poor nutritional conditions for pregnant women will cause illness and death, namely anemia and chronic energy deficiency (CED). Pregnant women who experience anemia can experience seizures to death if they lack iron. CED is still a major nutritional problem that often affects WUS. A person can be said to have CED if the results of the upper arm circumference (LILA) measurement are below 23.5 cm. The impact of premarital women who suffer from CED can include anemia, maternal death during childbirth, low birth weight (LBW) babies, premature birth, babies born with defects and even death in babies (Stephanie et al. 2016). Women of childbearing age who suffer from CED are at risk of giving birth to children with CED later in life, health problems such as morbidity, mortality and disability arise. Malnutrition can reduce the quality of Human Resources (HR) (Paramata and Sandalayuk, 2019). Preconception is the period when WUS before pregnancy (Meriska, 2019). The premarital period can be associated with the preconception period, because after marriage women will immediately undergo the conception process (Doloksaribu and Simatupang, 2019).

Prospective brides are the right preconception period to be able to prepare for pregnancy (Umisah and Puspitasari, 2017). The high population growth is partly due to the low age of first marriage. Women who marry early, less than 20 years old, will have a longer exposure to the risk of pregnancy (Kristanti et al., 2019). The importance of maintaining adequate nutrition for prospective brides before pregnancy is because good and sufficient nutrition will support the optimal function of the reproductive organs such as smooth egg maturation, production of good quality egg cells and a perfect fertilization process (Doloksaribu and Simatupang,

2019). Preconception nutritional status is one of the factors that can affect pregnancy conditions and infant well-being (Umisah and Puspitasari, 2017).

LITERATURE REVIEW

Chronic energy deficiency is the result of an imbalance between intake to meet energy needs and expenditure. Food unavailability often occurs at the household level, disproportionate distribution within the household and the heavy workload of pregnant women. In addition, several important things related to the nutritional status of a mother are pregnancy in young mothers (less than 20 years), pregnancy with a short interval with previous pregnancies (less than 2 years), too frequent pregnancies, and pregnancy at too old an age (over 35 years). Lack of nutrients that continues to increase will result in tissue deterioration and decreased levels of nutrients in the blood such as hemoglobin levels, serum vitamin A, and low carotene. Lack of nutrients that continues to decrease can cause changes in body functions such as dizziness, fatigue, shortness of breath / weakness. Anatomical wounds such as xerophthalmia and keratomalcia occur in people with vitamin A deficiency, edema, skin wounds in people with kwashiorkor if malnourished (Supariasa, 2017).

Environmental and human factors are the result of the occurrence of KEK due to lack of nutrient intake, then the individual's nutrient needs are used to meet daily needs. Individuals who experience long-term or chronic malnutrition will have their stored nutrients depleted and can cause tissue deterioration. These individuals can be declared malnourished by being marked by weight loss and growth and development will be disrupted (Supariasa, 2017).

Food consumption is influenced by income, food and availability of food ingredients. Developing countries have nutritional status that is less affected by inadequate food consumption and infectious diseases in individuals. Indirect causes of nutritional problems for socio-economic levels are education and income levels (Supariasa, 2017).

Upper arm circumference in the WUS group is a way to detect early easily that can be carried out by the community to determine the risk of KEK (Supariasa, 2018). Upper arm circumference describes muscle tissue and subcutaneous fat layers. Upper arm circumference is an easy measurement even though it is not done by professionals. Body weight affects changes in upper arm circumference. Therefore, upper arm circumference is an index of current nutritional status (Supariasa, 2018).

Food is useful for the body, types of food except drugs can meet nutritional content and their chemical elements can be converted into nutrients by the body (Almatsier, 2016). Choosing food properly can provide the nutrients needed by the body according to the normal function of the body. If you choose the wrong food, it will have an impact on the deficiency of certain essential nutrients. Eating habits, cooking, food distribution can affect consumption by the community or family. By fulfilling these things, it depends on the type of income, education, and level of individual knowledge (Almatsier, 2016).

METHODS

This study is an observational analytical study that aims to determine the Analysis of Consumption Levels and Nutritional Knowledge with the Incidence of Chronic Energy Deficiency (CED) in Prospective Brides and Grooms at the Siulak Gedang Health Center, Siulak District, Kerinci Regency, conducted at the Siulak Gedang Health Center, Siulak District, Kerinci Regency in October-December 2023. The population in this study were all prospective brides and grooms registered in June 2023, totaling 33 respondents. The sample in this study was all prospective brides and grooms registered in June 2023, totaling 33 respondents.

RESULTS

Table 1. Univariate analysis

No	Description	Total (n)	Percentage (%)
I.	**Age**		
1.	High risk (<20 />35 years)	21	63,6
2.	Low risk (20-35 years)	12	36,4
II	**Education**		
1.	Low	18	54,5
2.	High	15	45,5
III	**Occupation**		
1.	Not working	17	51,5
2.	Working	16	48,5
IV	**Knowledge**		
1.	Low	19	57,6
2.	Medium	5	15,2
3.	High	9	27,3
V	**Concumption level**		
1.	Severve deficit	17	51,5
2.	Medium deficit	3	9,1
3.	Mild deficit	4	12,1
4.	Normal	9	27,3
VI	**KEK Catin**		
1.	KEK	23	69,7
2.	Not KEK	10	30,3
	Total	33	100

Based on table 1, it can be seen that the characteristics of the respondents are mostly in the high-risk age group, namely <20 years and >35 years, as many as 21 respondents (63.3%). The most education is low education, graduating from junior high school, as many as 18 respondents (54.5%), respondents are unemployed, as many as 17 respondents (51.5%), low knowledge, as many as 19 respondents (57.6%), the most consumption level is a severe deficit, 17 respondents (51.5%). And the most KEK incidents are 23 respondents (69.7%).

Table 2. Bivariate Analysis

No.	Variable	KEK N	KEK %	No KEK N	No KEK %	N	%	p-value
I	**Age**							
1.	High risk	18	85,7	3	14,3	21	100	0,024
2.	Not risk	5	41,7	7	58,3	12	100	
II	**Education**							
1.	Low	16	88,9	2	11,1	18	100	0,025
2.	High	7	46,7	8	53,3	15	100	
III	**Occupation**							
1.	Not working	16	94,1	1	5,9	17	100	0,006
2.	Working	7	43,8	9	56,2	16	100	

III	Knowledge							
1.	Low	16	84,2	3	15,8	19	100	0,020
2.	Medium	4	80,0	1	20,0	5	100	
3.	High	3	33,3	6	66,7	9	100	
IV	Consumption level							
1.	Severe deficit	15	88,2	2	11,8	17	100	
2.	Moderate deficit	2	66,7	1	33,3	3	100	0,037
3.	Mild deficit	3	75,0	1	25,0	4	100	
4.	Normal	3	33,3	6	66,7	9	100	
	Total	23	69,7	10	30,3	33	100	

DISCUSSION

The results of the statistical test showed a p-value = 0.024 (p <0.05) in other words there is a relationship between age and KEK in prospective brides and grooms at the Siulak Gedang Health Center, Siulak District, Kerinci Regency.

Age is the length of time the prospective bride and groom have lived, calculated from birth to their last birthday when the study was conducted. The new marriage law changes the minimum age limit for men and women who will marry at least at the age of 19 years. The productive age for prospective brides experiences a fertile period at the age of 19-35 years (Amalia and Siswantara, 2018).

There is an increase in the need for nutrients in women of childbearing age related to the acceleration of growth they experience, where the nutrients absorbed by the body are used to increase body weight and height, accompanied by an increase in the number of body cell tissue sizes to achieve optimal growth (Prawirohardjo, 2018).

The results of the statistical test showed a p-value = 0.025 (p <0.05) in other words there is a relationship between education and KEK in prospective brides and grooms at the Siulak Gedang Health Center, Siulak District, Kerinci Regency.

A person's educational history is an important element that can affect their nutritional status and health. Nutritional and health problems often occur due to ignorance and lack of information about the importance of fulfilling nutrition for body health, which has an impact on awareness and willingness to behave in a balanced nutrition in their lives (Alam et al., 2020).

Changes in attitudes and behavior are greatly influenced by higher levels of education so that it is easier to absorb information by implementing it in healthy behavior and lifestyles, especially in terms of health and nutrition. The higher the level of formal education, the more indirectly it increases awareness of living healthier, thereby reducing the risk of health problems (Mahirawati, 2014).

The results of the statistical test showed a p-value = 0.006 (p <0.05) in other words there is a relationship between work and KEK in prospective brides and grooms at the Siulak Gedang Health Center, Siulak District, Kerinci Regency.

Several studies have shown that work determines how much income is earned each month and the family's purchasing power to meet household needs. There is a significant relationship between work and monthly income with the incidence of KEK (Mahirawati,

2014).

The results of the statistical test showed a p-value = 0.020 (p <0.05) in other words there is a relationship between knowledge and KEK in prospective brides and grooms at the Siulak Gedang Health Center, Siulak District, Kerinci Regency.

The level of nutritional knowledge was measured using a questionnaire with 30 question items regarding nutrition in prospective brides and grooms. The study showed no relationship between nutritional knowledge and KEK in SMAN 1 Pesawahan. Based on the results of the study, it can be concluded that there is a lack of implementation by respondents in consuming nutritious food that is balanced so that many prospective brides and grooms still suffer from KEK.

The results of the statistical test showed a p-value = 0.037 (p <0.05) in other words there is a relationship between the level of consumption and KEK in prospective brides at the Siulak Gedang Health Center, Siulak District, Kerinci Regency.

Based on the results of the analysis, it was concluded that there was a significant relationship between the level of consumption and the occurrence of KEK in prospective brides. This is in line with the results of the study (ZAKI et al., 2017) entitled Macronutrient intake and upper arm circumference in adolescent girls in rural areas of Banyumas Regency, namely that female adolescent subjects in rural areas of Banyumas Regency had macronutrient intake in the severe deficit category. LiLA is in the category at risk of KEK and there is a relationship between macro intake and LiLA.

Based on research conducted on prospective brides, they have a level of consumption of energy-producing nutrients that are deficit in carbohydrate, protein and fat consumption. The level of consumption of nutrients, namely carbohydrates, protein and fat, which are mostly deficits in prospective brides, will indirectly affect the level of energy consumption to become a deficit. Energy sufficiency in a person is greatly influenced by the consumption of energy-producing nutrients. Energy is obtained from the metabolism of nutrients such as carbohydrates, proteins and fats found in food.

CONCLUSION

The results of statistical tests show that there is a relationship between age, education, occupation, knowledge, consumption level and KEK in prospective brides and grooms at the Siulak Gedang Health Center, Siulak District, Kerinci Regency.

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