

THE ANALYSIS OF FACTORS RELATED TO THE PREVALENCE OF CHRONIC ENERGY DEFICIENCY (CED) IN PREGNANT WOMEN

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ABSTRAK : ANALISIS FAKTOR-FAKTOR TERKAIT PREVALENSI KEKURANGAN ENERGI KRONIS (KEK) PADA IBU HAMIL

Latar Belakang: Angka kematian ibu Indonesia Tahun 2018 menunjukkan bahwa AKI adalah sebesar 305 kematian ibu per 100.000 kelahiran hidup. Ibu meninggal akibat komplikasi yang terjadi dari buruknya status gizi ibu dan pada akhirnya berdampak kepada kondisi kesehatannya begitu juga dengan kondisi janin yang dilahirkan. Prevalensi KEK wanita hamil usia subur (15-49 tahun) di Indonesia adalah sebesar 17.3%.

Tujuan Penelitian: Untuk melakukan review pada beberapa literature terkait faktor-faktor yang berhubungan dengan Kejadian Kekurangan Energi Kronik (KEK) pada Ibu Hamil.

Metode Penelitian: Penelitian ini menggunakan metode literature review. Artikel dikumpulkan dengan melakukan penelusuran/ pencarian jurnal menggunakan Google Search atau bibliografi dari artikel yang ditelusur dan google *scholarly*. Literature review ini menggunakan literature terbitan tahun 2016-2019 yang dapat diakses fulltext dalam format pdf.

Hasil literature review: Hasil penelitian menunjukkan bahwa Ada hubungan yang signifikan antara umur, ada hubungan pendapatan keluarga, ada hubungan pengetahuan, ada hubungan pendidikan, dan ada hubungan paritas dengan kejadian KEK pada ibu hamil.

Kesimpulan dan Saran: Penelitian diatas menunjukkan adanya hubungan antara umur, pendapatan keluarga, pengetahuan, pendidikan, dan ada hubungan paritas dengan kejadian KEK pada ibu hamil.

Saran diharapkan kepada lahan penelitian, penelitian ini dapat menjadi bahan masukan dalam mengambil kebijakan dalam mengatasi kejadian kekurangan energi kronik (KEK) pada ibu hamil.

Kata kunci: Ibu hamil KEK, Umur, Pendapatan Keluarga, Pengetahuan, Pendidikan, Paritas.

ABSTRACT

Background: Indonesia's maternal mortality rate in 2018 shows that the MMR is 305 maternal deaths per 100,000 live births. The high maternal mortality rate is due to complications that occur from the poor nutritional status of the woman and ultimately impact her health condition as well as the condition of the fetus being born. The prevalence of pregnant women with CED of childbearing age (15-49 years) in Indonesia is 17.3%.

Objectives: To review some literature related to factors associated with the prevalence of Chronic Energy Deficiency (CED) in Pregnant Women.

Research Methods: This study uses the literature review method. Articles are collected by conducting a journal search using Google Search or a bibliography of the articles searched with Google Scholar. This literature review uses literature published in 2016-2019, which can be accessed in full-text in pdf format.

Results: The results of the study show that there is a significant relationship between age, family income, knowledge, education, and parity with the incidence of CED in pregnant women.

Conclusions: The above research shows a relationship between age, family income, knowledge, and education, and there is a relationship between parity and the incidence of CED in pregnant women.

Suggestion The research field is expected to be used as input for policymaking in overcoming the incidence of chronic energy deficiency (CED) in pregnant women.

Keywords: Chronic Energy Deficiency (CED); Pregnant women; Factors related to CED

INTRODUCTION

Chronic Energy Deficiency (CED) in pregnancy can cause complications for the mother

and fetus, including anaemia and bleeding. In labour, there is a risk of experiencing difficult and prolonged labour, premature birth, bleeding after childbirth and

death. While the impact on the fetus can cause miscarriage, abortion, birth defects and low birth weight of the fetus.¹ These complications are a factor in the Maternal Mortality Rate (AKI), which is still very high. It is estimated that every day around 830 women die from complications of pregnancy or childbirth worldwide. In Indonesia, in 2018, it is estimated that around 305,000 mothers died after pregnancy and childbirth. Where 75 % of all causes of maternal death one of which is bleeding.² Complications from poor nutritional status have an impact on the mother and fetus being born.³

The prevalence of CED (15-49 years) of pregnant women of childbearing age in Indonesia reaches 17.3%.⁴ KEK can be caused due to insufficient food and energy sources containing micronutrients along with the increasing needs of pregnant women, especially in the third trimester of pregnancy.⁵ This is caused by various factors, including the age of the mother who is too young (<20 years) or the age of the mother at high risk of giving birth (>35 years), low level of education and knowledge, low socioeconomic level, high maternal parity, the strenuous activity of the mother, health status of the mother which affects her appetite, pregnant women who experience infectious diseases, pregnancies that are too close together so that the mother has not had the opportunity to improve her body after giving birth.¹

Unbalanced intake during pregnancy causes various impacts, namely the risk of birth defects, low birth weight (LBW), anaemia, bleeding and maternal

death.⁶ By conducting an Antenatal Examination (ANC), it is hoped that the incidence of CED in pregnant women can be prevented.⁷ Midwives have a central role in preventing KEK in pregnant women while carrying out their role in providing maternal and child health services.⁸ Based on the background described above, the researcher is interested in conducting a literature review on "Analysis of factors related to the incidence of Chronic Energy Deficiency (CED) in pregnant women."

METHOD

This type of research uses the Literature Review method, which uses an *electronic* database. Articles were collected by searching/searching journals using Google Search or a bibliography of the articles searched and Google Scholar. Only articles containing full text will be included in this review.

This literature study uses the method of collecting data from computerized database systematic search studies (PubMed, BMC, Cochrane review, Google Scholar) in the form of research journals and review articles in the last six years with the keywords pregnant women's nutrition and prenatal nutrition. The process of this literature study goes through an initial process. Problem formulation, article search, data evaluation, as well as analyzing and interpreting.

The literature review search scheme can be seen in the following figure:

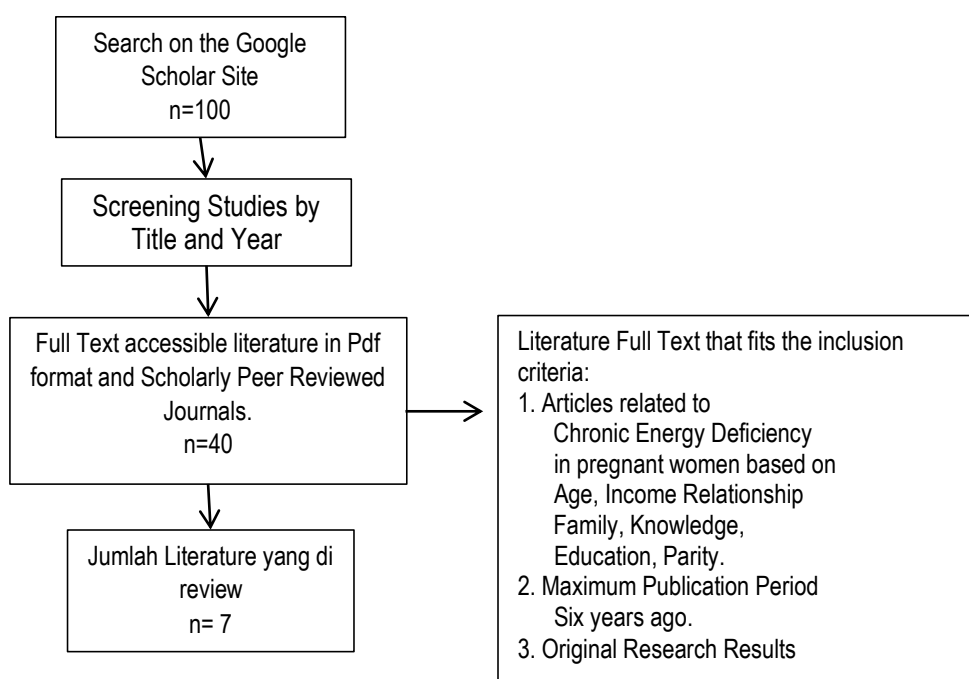


Figure 1. Literature Search Flow

RESULTS

A literature review was conducted on seven articles that were very relevant to the topic of this study, as presented in table 1.

Table 1
Literature reviewed

Researcher	Title	Year	Design/ Sampling Technique	Population and Sample	Results
Laila Rahmi	Factors related to Chronic Energy Deficiency (KEK) in pregnant women at the Belimbing Padang Health Center	2016	This type of research is analytic with a <i>cross-sectional design</i> using a <i>consecutive sampling technique</i> .	The population is all pregnant women, totalling 1,308 people, with a sample of 42 people.	The results show that the value of $\rho = 0.032$ ($\rho < 0.05$), there is a relationship between family income and KEK in pregnant women, the value of $\rho = 0.024$ ($\rho < 0.05$), there is a relationship between age and KEK in pregnant women, the value of $\rho = 0.044$ ($\rho < 0.05$) there is a relationship between parity and CED in pregnant women, the value of $\rho = 0.044$ ($\rho < 0.05$) there is a relationship between pregnancy spacing and CED in pregnant women.
Nursari Abdul Syukur	Factors that cause Chronic Energy Deficiency (KEK) in pregnant women at the Sidomulyo Health Center, Samarinda city	2016	This research is a descriptive study; the sample was taken by <i>total sampling</i> .	The population is all pregnant women, with a total sample of 88 people.	1) Characteristics: Age Most respondents are aged <20 years or 53 respondents (60.23%), most education is Elementary School or 40 respondents (45.46%), the most income is less or 55 respondents (62.5%), the highest parity is > 2 children or 44 respondents (50%). 2) The cause of Chronic Energy Deficiency (KEK) in Pregnant Women is economic factors or 28 respondents (31.82 %).
Indriati Fitrianingtyas, et al	Factors associated with Chronic Energy Deficiency (KEK) in pregnant women at Warung Jambu Community Health Center, Bogor City	2018	<i>cross-sectional</i> research design using a quantitative approach, using a <i>random sampling technique</i> .	The population in this study were all pregnant women totalling 1370 pregnant women. The sample in this study was 43 respondents.	The results showed that there was a relationship between knowledge about nutrition (p -value = 0.004) RR = 2.222, there was a relationship between infectious diseases (p -value = 0.000) RR = 0.227, there was a relationship between ANC pregnancy checks (p -value = 0.000) RR = 2.700 and the incidence of CED in pregnant women.

Febriyeni	Factors associated with Chronic Energy Deficiency in pregnant women	2017	Analytical descriptive research method with <i>cross-sectional approach</i> , taking <i>total sampling</i> .	The population is all pregnant women, with a total sample of 55 people	The results showed that there was a correlation between knowledge $p = 0.001$ ($p < 0.05$), there was an economic relationship $p = 0.005$ ($p < 0.05$), and there was a relationship between diet $p = 0.001$ ($p < 0.05$) with the incidence of CED in pregnant mother.
Musni, et al	Factors related to Chronic Energy Deficiency (KEK) in pregnant women at the UPTD Ajangale Health Center	2017	The method in this study is an analytic survey method with a <i>cross-sectional survey approach</i> , Technique sampling used is <i>purposive sampling</i> .	The population is all pregnant women, with a total sample of 64 people.	The results showed that there was a relationship between education (p -value = 0.025) and work (p -value = 0.047) with KEK in pregnant women, there was no relationship between the mother's age (p -value = 0.059) and parity (p -value = 0.383) with KEK in pregnant mother.
Rachmawati , et al	Multilevel Analysis on Factors Associated with Occurrence Chronic Energy Deficiency among Pregnant Women	2019	This study used a <i>case-control</i> design, cluster sampling	The population is all pregnant women, with a total sample of 200 people	The research results show that there is a relationship between food intake (p -value = 0.006), level of education (p -value = 0.030), occupation (p -value = 0.006), knowledge (p -value = -0.020), family income (p -value = 0.017), age (p -value = 0.030), parity (p -value = 0.010), utilization of ANC services (p -value = 0.007).
Naomi Edowai, et al	Factors Influencing With Malnutrition Pregnant at Tigi District Deiyai Regency	2018	Observational analytic research method with a <i>cross-sectional study design</i> , random sampling	The population is all pregnant women totalling 291 people, and a sample of 168 people.	The results showed that there was a relationship between education (p -value = 0.019), there was a relationship with work (p -value = 0.000), there was a relationship with knowledge (p -value = 0.000), and there was a relationship with eating frequency (p -value = 0.000). There is no relationship between age (p -value = 0.261), there is no relationship with family income (p -value = 0.254), there is no relationship with parity (p -value = 0.310), there is no relationship between birth spacing (p -value = 0.585) with the incidence KEK.

DISCUSSION

KEK occurs from a lack of intake of nutrients that takes place, causing a decrease in tissue.⁶ Based on the analysis of the journals from 7 articles/journals that specifically examined age, two journals were found that said age was related to the incidence of CED in pregnant women. Nutritional needs and age <20 years have not been able to meet their nutrition, especially to meet the nutrition of the fetus, while mothers aged >35 years will experience a high risk of pregnancy.⁴

Research by Rahmi (2016) and Syukur (2016) shows a relationship between family income and KEK in pregnant women. Income is the factor that most determines the quantity and quality of food dishes. Economic limitations cause the inability to buy good quality food, so the fulfilment of nutrition will be disrupted.¹ Income, social status and education can be affected by work. In addition, work can also measure the conditions in which a person works, which can affect his health condition.²⁷

The effect of knowledge and level of education on found in 4 journals that have been analyzed. The level of education is related to the mother's nutritional knowledge and the mother's knowledge in caring for her pregnancy. This nutritional knowledge will influence decision-making regarding access to food and will also affect behaviour when distributing food in the family and how to process food ingredients.²⁸

Research results of Rachmawati et al (2019), Rahmi (2016) and Syukur (2016) show that there is a significant relationship between parity and the incidence of CED in pregnant women. The high number of parity also illustrates the rate of repeated pregnancies, so it has many risks. It can be said that physically a high number of parity reduces the uterus's ability as a medium for fetal growth. Damage to the blood vessels of the uterine wall affects the circulation of nutrients to the fetus, where the number of nutrients will be reduced compared to subsequent pregnancies.²⁷ This shows that these studies show significant results regarding the factors associated with the incidence of chronic energy deficiency in pregnant women.

Conclusion

Based on the results of a literature review of 7 articles on the analysis of factors related to the incidence of Chronic Energy Deficiency (CED) in pregnant women, it was found that age, income, knowledge, education and parity were associated with the incidence of chronic energy deficiency in pregnancy. Expected

Suggestion

We hope to carry out further research on the factors that directly impact the incidence of chronic energy deficiency in pregnant women.

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