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The Relationship Between Age and Parity with the Incidence of Chronic Energy Deficiency (KEK) in Pregnant Women

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ABSTRACT

The World Health Organization (WHO) estimates that worldwide more than 585,000 women die each year during pregnancy or childbirth. The maternal mortality rate is used as an indicator to describe the level of awareness of healthy living behavior, nutritional problems and maternal health. Nutritional problems that commonly occur in pregnant women are nutritional deficiencies, both macro and micro nutritional deficiencies which are manifested in chronic energy deficiency status (KEK). Chronic Energy Deficiency (KEK) is a condition in which the mother suffers from chronic (chronic) food shortages, causing health problems for pregnant women. The average prevalence of pregnant women who experience CED in the world is 15-47%. Indonesia is a country that has moderate category of public health problems (5-9.9%) for pregnant women at risk of KEK.

The design of this research is analytic with cross sectional approach. The population in this study were all pregnant women who had their pregnancy checked at PMB. Wirahayu in January-August 2022 totaled 430 people. The sample taken is the entire population of 430 people. Data analysis techniques are univariate and bivariate. Based on the results of research from 430 pregnant women, it was found that 83 pregnant women (19.3%) experienced CED. Statistical test results obtained p-value 0.015, this means that there is a relationship between parity to the incidence of KEK. Based on the age of the respondent, the results of the statistical test obtained a p-value of 0.000, which means that there is a relationship between maternal age and the incidence of KEK.

In this study, because there are still many KEK incidence rates, regardless of parity and maternal age, it is better if pregnant women during ANC are given explanations, leaflets and descriptions of the dangers of Chronic Energy Deficiency (KEK), so that mothers can understand the impact of KEK.

Keywords: Chronic Energy Deficiency, KEK

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INTRODUCTION

The World Health Organization (WHO) estimates that worldwide more than 585,000 women die each year during pregnancy or childbirth. Likewise, in Lampung Province, MMR during 1997-2012 tended to increase again, from 370 per 100,000 live births to 359 per 100,000 live births in 2012. In 2021 below, it can be seen that the number of maternal deaths has increased compared to 2020, from 115 cases. to 187 cases. [1]

One of the indirect causes of maternal death is nutritional problems that commonly occur in pregnant women, both macro and micro nutritional deficiencies which are manifested in chronic energy deficiency status (KEK). Chronic Energy Deficiency (KEK) is a condition in which the mother suffers from chronic (chronic) food shortages, causing health problems for pregnant women.[2] The average prevalence of pregnant women who experience CED in the world is 15-47%. Indonesia is a country that has moderate category of public health problems (5-9.9%) for pregnant women at risk of KEK.[3] Based on data sources for routine reports in 2022 collected from 34 provinces, it is known that there are 283,833 pregnant women with Lila <23.5 cm (CED risk) from 3,249,503 pregnant women measured by Lila, so it is known that the achievement of pregnant women with a risk of CED is 8 .7% (cut off on February 4, 2022) while the target for 2021 is 14.5%.[3]

According to the Basic Health Research (Riskesdas) in 2018, the prevalence of KEK risk in pregnant women (15-49 years) is still quite high at 17.3%, this figure shows an improvement from the percentage of pregnant women with KEK which is expected to decrease by 1.5% every year. year. There are 7 provinces where the percentage of pregnant women with KEK is still above the target of 14.5%, while the other 27 provinces have reached the expected target. DKI Jakarta is the province with the lowest percentage of KEK pregnant women at 3.1% while the provinces with the highest percentage of KEK pregnant women are West Papua (40.7%), East Nusa Tenggara (25.1%) and Papua (24.7 %) [4]

Nationally, the coverage of KEK pregnant women receiving PTM in 2019 is 90.52%, but this figure is still below the 2019 Strategic Plan target of 95%. Provinces with the highest percentage of KEK pregnant women receiving PTM were West Kalimantan, South Sumatra, and Gorontalo, while the lowest percentage was West Nusa Tenggara (71.36%). As for the province of Lampung itself, it reached 93.10%.[4]

The impact of KEK for the mother is the risks and complications such as anemia, bleeding, the mother's weight does not increase normally, and is exposed to infectious diseases, so that it will increase maternal mortality, while the impact on the fetus is affecting the process of fetal growth and can cause miscarriage, abortion, infant stillbirth, neonatal death, congenital defects, intra partum asphyxia, and low birth weight (LBW) and at the time of delivery resulted in difficult and prolonged labor, premature/premature delivery, postpartum hemorrhage, and delivery by cesarean section which tended to increase.

The focus of community nutrition improvement is nutrition improvement in the First 1000 Days of Life (HPK) group, which includes pregnant women, breastfeeding mothers, infants and children up to 2 years of age. A nutrition program that focuses on 1000 HPK has been proven to be cost effective and has shown significant results in improving the nutrition of the community in general. The group of pregnant women is a strategic group to be given nutrition improvement interventions because mothers with good nutritional status tend to give birth to babies with good nutritional status. However, the results of the study show that generally pregnant women experience nutritional deficiencies such as Chronic Energy Deficiency (KEK).

According to the Ministry of Health[4] if the nutritional needs of the mother both in terms of quantity and quality are not met, it will be difficult for the mother and fetus to gain weight. These conditions can increase health risks for mothers and babies to be born. Pregnant women with poor nutritional and health status are at risk of giving birth to premature babies, low birth weight and increasing the risk of morbidity and mortality for both mother and baby. To monitor weight gain during pregnancy, one of them is by measuring the Upper Arm Circumference (LILA). In Indonesia, the LILA threshold with the risk of CED is 23.5 cm, this means that pregnant women with a risk of CED are expected to give birth to LBW babies. If a baby is born with low birth weight (LBW) will have a risk of death, malnutrition, growth disorders and child development disorders.[5]

One method of assessing nutritional status to measure the nutritional status of pregnant women with SEZ is to use anthropometry, we must look at and pay attention to the various indicators of nutritional status that exist. These various indicators are needed so that we can measure several parameters to determine the nutritional status of pregnant women. The parameter referred to here is a single measure of the human body, in the context of pregnant women, including: age, weight, height, upper arm circumference.[2]

These various internal and external factors seem to have a major influence on the nutritional status of pregnant women. Internal or external factors that can affect maternal nutrition during pregnancy include the age of pregnant women and parity. Age is a very important parameter in the whole process of assessing nutritional status. Age greatly determines the extent to which human organs function optimally and as they should. From age too, we can find out how long it has been and the extent to which various nutritional intakes that enter the body affect the body and human life. If we make mistakes in determining age, it can lead to various errors in the interpretation of the determination of nutritional status. In addition, even though we already have various accurate measurements of the human body, such as height and weight, it will not be meaningful if it is not accompanied by an appropriate age determination.[2] Based on the results of Tyas Triatmaja's research with the title of factors related to KEK in pregnant women in Kediri Regency, namely There is a relationship between the age of pregnant women and KEK status.

Parity is one of the important factors that can affect the nutritional status of pregnant women. Parity is a factor that greatly influences the outcome of pregnancy conception. A woman should always be vigilant, especially a woman who has been pregnant or has given birth to four or more children. The results of the Utami K study in 2020[6] showed that there was a significant difference in the incidence of CED between primigravida and multigravida pregnant women (p-value 0.0004).

The incidence of Chronic Energy Deficiency (KEK) in PMB Wirahayu, STr.Keb tends to increase every year. From the results of the presurvey in April 2022, 10 out of 30 pregnant women experienced KEK. Based on this phenomenon, the authors are interested in conducting research on "The relationship between age and parity with the incidence of chronic energy deficiency (KEK) in PMB. Wirahayu Panjang in 2022.

METHOD

This study is an analytical study with a cross sectional approach that aims to determine the relationship between age and parity with the incidence of chronic energy deficiency (KEK) in pregnant women, by looking at the patient's medical records or records at PMB Wirahayu, S.Tr.Keb from January to August 2022.

The population is the entire object of research or the object under study.[7] while the population in this study were all pregnant women in PMB Wirahayu S.STr.Keb Bandar Lampung City, totaling 430 people in 2022. The time of the study was carried out in August 2022. Sampling in this study used the Total Sampling technique, namely the entire population was taken as the research sample, which amounted to 430 people.

The analysis used is univariate and bivariate. Univariate analysis is presented in the form of frequency distribution table and percentage in each variable while bivariate analysis uses statistical technique, namely Chi Square correlation test with 95% confidence level. It is said that there is a significant relationship if the p value (<0.05) and there is no significant relationship if (p> 0.05).[7]

RESULTS

Table 1
Chronic Energy Low Frequency Distribution

No	Variable	Frequency	Percentage (%)
1	KEK (chronic lack of energy)	83	19,3
2	No KEK (chronic lack of energy)	347	80,7

The results of the univariate analysis of the number of pregnant women with SEZ were 83 people or 19.3% and those without KEK were 347 people or 80.7%.

Table 2. KEK Frequency Distribution by Age

No		Frequency	Percentage (%)
1	age at risk	64	14,9
2	age is not at risk	366	85,1

The results of the univariate analysis for the age variable, which were at risk (< 20 years & > 35 years) were 64 people (14.9%) and 26 respondents who were not at risk (20-35 years) were 366 people (85.1%).

Table 3

KEK frequency distribution by parity

No	Parity	Frequency	Percentage (%)
1	Multiparity	315	73,3
2	Primiparity	115	26,7

The results of univariate analysis, for the parity variable, it is known that of the 430 respondents who were primiparous as many as 115 people (26.7%) and multiparous as many as 315 people (70.3%).

Table 4

Relationship between KEK Incidence and Maternal Age

Variabel	KEK		No KEK		amount	p.value
	n	%	n	%		
Age at risk	46	55,4	18	5,2	64	0,000
Age is not at risk	37	44,6	329	94,8	366	

The results of the bivariate analysis on the age variable, it is known that from 64 respondents with age at risk as many as 46 people (55.4%) experienced CED, and from 366 respondents with age not at risk as many as 37 people (44.6%) experienced CED. Statistical test results obtained p-value = 0.000 (p-value <0.05), this means that there is a relationship between maternal age and the incidence of CED in pregnant women.

Table 5

Hubungan Kejadian KEK dengan Paritas Ibu

Parity	KB				Jumlah	*P value*
	KEK		No KEK			
	n	%	n	%		
Multiparity	52	62,7	263	75,8	315	0,015
Primiparity	31	37,3	84	24,2	115	

DISCUSSION

In the univariate analysis of 430 pregnant women, there were 83 people or 19.3% who experienced Chronic Energy Deficiency (KEK). Based on research from Widyawati W and Sulistyoningtyas S[8] with the title Description of the characteristics of pregnant women with chronic

energy deficiency at the Pajangan Health Center in 2018, the results showed that pregnant women who experienced chronic energy deficiency (KEK) at the Pajangan Health Center in 2018 were 84 people and most of the age group. Pregnant women who experience CED are mothers who are not at risk as many as 74 people (88%) and the parity of pregnant women who experience KEK is primigravida as many as 50 people (59.5%). Parity is one of the important factors that can affect the nutritional status of pregnant women. Parity is a factor that greatly influences the outcome of pregnancy conception. Chronic energy deficiency is more common in multiparas than primiparas. A woman should always be vigilant, especially a woman who has been pregnant or has given birth to four or more children. This vigilance is necessary because there will be various conditions, namely health conditions that may change quickly. Pregnant women will be very easily disturbed by their health, for example experiencing a lack of nutritional intake.

Likewise, Wardiyah's[9] research with the title Factors related to Chronic Energy Deficiency Incidence (KEK) in pregnant women in the Rajabasa Indah Health Center Bandar Lampung Work Area in 2018, it was found that the incidence of KEK was 52 (23.6%) respondents. This means that there are still many pregnant women who experience KEK. In the opinion of researchers, pregnant women who are at risk of KEK will have an effect on pregnancy, childbirth and the fetus. Chronic Energy Deficiency during pregnancy can affect both the mother and the fetus she is carrying. Risks and complications that occur during this period include anemia, bleeding, not gaining weight normally and being exposed to infectious diseases, difficult and prolonged labor, premature delivery, bleeding, miscarriage or abortion, stillbirth, neonatal death, disability. congenital, anemia in infants, infants with low birth weight (LBW) From the results of statistical tests in this study for the variable age of pregnant women obtained p-value = 0.000 (p-value <0.05), this means that there is a relationship between maternal age and the incidence of CED in pregnant women. In line with the results of Suwito A and Susilawati's research[10] with the title Chronic energy deficiency events in pregnant women, the results of the age statistic test (p value = 0.005 OR = 4.08) which means that there is a relationship between maternal age and the incidence of CED in pregnant women. Pregnant women who are less than 20 years old have a very high risk of pregnancy. The risk can occur to himself or to the baby he is carrying. This high risk can occur due to linear growth or height, which is generally completed at the age of 16-18 years. This growth then proceeds with maturation of the pelvic cavity growth a few years after linear growth is complete, and that linear growth is complete at about 20 years of age.

As a result, a pregnant woman who is not yet 20 years old, may experience various childbirth complications, as well as impaired completion of optimal growth. This is because the growth process itself has not yet been completed, and because various nutritional intakes are not or are not sufficient to meet the needs of themselves who are still growing. . Meanwhile, pregnant women who are more than 35 years old are also very at risk. At the age of more than 35 years, a person who experiences pregnancy will be more susceptible to disease. The organs of the womb in the woman will get older, and the birth

canal will also become stiffer. At the age of more than 35 years, there is a risk of having a disabled child, as well as obstructed labor, and bleeding in pregnant women will be greater.[2] The results of this study are in line with research conducted by Tyas Triatmadja,[11] the factors related to KEK in pregnant women in Kediri Regency, namely there is a relationship between the age of pregnant women and KEK status. Similarly, the results of Utami K's study[6] There is a significant difference in the incidence of CED in pregnant women aged <20 years and aged 20-35 years (p-value 0.03).

In this study, the results of bivariate analysis for parity variables, from 115 primiparous respondents 31 people (37.3%) experienced CED, and from 315 multiparous respondents 52 people (62.7%) experienced CED. Statistical test results obtained p-value = 0.015 (p-value <0.05), this means that there is a relationship between parity and the incidence of CED in pregnant women. Similarly, Marjan's research[12] with the title Determinant Analysis of factors related to the incidence of CED in pregnant women in the Gunung Sindur area of Bogor, it is known that there is a relationship between parity (p = 0.027) and the incidence of CED in pregnant women. Similarly, Syakur Rosdiana's research[13] with the title factors related to the incidence of KEK in pregnant women in the working area of the Maccini Health Center Sombala Makassar, the result is parity associated with chronic energy deficiency with a p value (0.001). Research related to the relationship between parity and KEK in pregnant women was also investigated by Anggraeni[4], Renjani[15] and Rini R[16] and the results showed that there was a relationship between parity and the incidence of CED in pregnant women. Parity is the status of a woman in relation to the number of children ever born. Parity which is included in the high risk factor for pregnancy is multipara, where this can cause conditions that affect the optimization of the mother and fetus in the pregnancy they are facing. In the opinion of the researcher, the amount of parity will affect the physical condition and nutritional status of the mother, during pregnancy the nutrients are not only needed by the mother but also for the fetus she contains. Nutritional problems that are often experienced by pregnant women are chronic energy deficiency (KEK) if they do not pay attention to their nutritional intake.

CONCLUSION

After discussing the whole series of analyzes of the results of research in the field, it can be concluded that from 430 respondents, the incidence of Chronic Energy Deficiency (KEK) in pregnant women was 83 cases (19.3%) from 430 respondents. Pregnant women with the most parity were multiparous as many as 315 cases (73.3%) from 71 respondents and pregnant women aged < 20 years and > 35 years to the incidence of KEK as many as 64 cases (14.9%) from 430 respondents. From the results of the bivariate analysis, it was found that there was a significant relationship between parity and the incidence of CED (p-value = 0.015), and there was a significant relationship between maternal age and the incidence of CED (p-value = 0.000).

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