Factors Affecting the Incidence of Chronic Lack Energy (SEZ) in Pregnant Women at the Tanjung Unggat Health Center, Tanjung Pinang City, Kepri Province in 2023

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ABSTRACT
Chronic energy deficiency (CED) in pregnant women is a condition of insufficient protein and energy intake which can cause health problems for the mother and fetus. This study aims to determine the factors that influence the occurrence of CED in pregnant women. An analytical survey method with a cross-sectional approach was used by collecting primary data through questionnaires and secondary data from Community Health Center reports. The research was conducted at the Tanjung Unggat Community Health Center, Tanjungpinang City in December 2023 with a sample of 51 pregnant women selected using the Total Sampling method. Data analysis used univariate, bivariate (chi-square test), and multivariate (logistic regression) analysis. The results of the analysis show that maternal age, education, employment, parity, knowledge, Body Mass Index (BMI), and hemoglobin (Hb) levels have a significant relationship with the occurrence of CED. The Hb variable has the greatest influence on KEK with an Exp (B) value of 15.098. This study concludes that there is no effect of age and education on CED, while employment, parity, knowledge, BMI, and Hb are related to the incidence of CED in pregnant women. It is recommended that health workers promote and prevent pregnant women by recommending regular Antenatal Care (ANC) visits to health workers to detect health conditions early.

Keywords: Chronic Energy Deficiency (CED), Influence Factors, Pregnant Women

INTRODUCTION
The success of a nation can be reflected through the quality of its Human Resources (HR). One of the key factors in the formation of quality human resources is good and adequate nutritional intake, especially in the early stages of development, such as pregnancy to the age of two. Adequate nutrition is essential for optimal brain development and physical growth in children.

Pregnant women who experience Chronic Energy Deficiency (SEZ) will face several problems, both for the mother and the fetus she is carrying. The risk of SEZ in pregnant women can cause various complications, including anemia, bleeding, increased risk of infection, premature birth, or low body weight. This can have an impact on fetal growth and development, even resulting in miscarriage or neonatal death.

The importance of adequate nutritional intake during pregnancy is based on the fact that the baby in the womb obtains nutrients from the mother's reserves. Therefore, maintaining a good nutritional status before pregnancy is an important key so that the mother's nutritional reserves are sufficient to meet the needs of her
Measurement of maternal weight gain (BB) during pregnancy is an important indicator to assess whether the fetus is getting adequate nutritional intake.

Despite various efforts, data shows that the SEZ rate in pregnant women is still quite high in Indonesia. The percentage of pregnant women who experience SEZ reached 17.3% based on Riskesdas in 2018. This figure shows that nutritional problems in pregnant women are still a serious concern in efforts to improve public health.

At the local level, data from the working area of the Tanjung Unggat Health Center in Tanjungpinang City in 2022 shows that there are cases of SEZs in some pregnant women. Preliminary studies in this region also show a trend of SEZ cases in pregnant women. Therefore, it is important to research the factors affecting SEZs in pregnant women in the region to develop more effective intervention strategies.

Through this research, it is expected to better understand the factors that affect SEZs in pregnant women at the Tanjung Unggat Health Center in Tanjungpinang City. The aim is to provide a solid foundation for the development of more effective intervention programs in addressing SEZ problems in pregnant women. Thus, it is expected to improve the health of pregnant women and fetuses and contribute to improving the quality of human resources at the local and national levels.

RESEARCH METHOD

The research method used in this study consists of several stages which include research design, location and time of research, population and sample, data collection techniques, operational definitions and measurement aspects, data processing methods, and data analysis.

The research design used was quantitative research with a cross-sectional study approach. This approach was chosen to analyze the factors that influence the incidence of Chronic Energy Deficiency in Pregnant Women at Tanjung Unggat Health Center, Tanjung Pinang City, Riau Islands Province.

The location of the study was conducted at the Tanjung Unggat Health Center, which is located on Jl. Sultan Machmud Gg. Waru, Tj. Unggat, Bukit Bestari District, Tanjung Pinang City, Riau Islands. The research time is estimated to be carried out from the stage of submitting the proposal title to the thesis exam, which is from November to December 2023.

The study population consisted of all pregnant women who visited the Tanjung Unggat Health Center, Tanjungpinang City, Riau Islands Province, from June to August 2023, with a total of 51 people. The study sample used a total sampling technique, where all pregnant women who met the inclusion and exclusion criteria were used as samples.

Data collection techniques are carried out through several methods, including the use of questionnaires for primary data, documentation from other parties for secondary data, and access to official websites for tertiary data. In addition, measurements of Upper Arm Circumference (LILA), Body Mass Index (BMI), and hemoglobin levels were also carried out to support data collection.

RESEARCH RESULTS

The results of this study describe the condition of Tanjung Unggat Health Center and the factors that influence the incidence of Chronic Energy Deficiency (SEZ) in pregnant women in the region. Tanjung Unggat Health Center is located in Tanjung Unggat sub-district, where the majority of the population are fishermen and laborers. Their main livelihood is from marine catches, although some also seek economic supplementation with various side jobs. Most people eat staple foods such as rice and sweet potatoes, as well as fish they catch. However, the diversity of food consumption is uneven, especially for the lower-income groups who are less able to afford nutritious food. Although Tanjung Unggat Health Center has provided minimum standard pregnancy services, there are still pregnant women who do not get adequate nutritional intake, especially from animal protein sources such as fish.

The vision, mission, motto, and goals of Tanjung Unggat Health Center affirm its commitment to providing quality and equitable health services to the community, with a focus on independence in health. The values adhered to, such as professionalism, friendliness, informativeness, and equality in service, reflect this commitment.

The results showed that the majority of pregnant women at Tanjung Unggat Health Center experienced chronic energy deficiency (SEZ). Factors that contribute to the incidence of SEZs include age, education, occupation, parity, knowledge, body mass index (BMI), and hemoglobin (HB) levels. The results of the univariate analysis show that the majority of pregnant women with SEZs have secondary education, work, have high parity, and have sufficient knowledge. However, the results of bivariate analysis showed a relationship between education, employment, parity, knowledge, BMI, and hemoglobin with the incidence of SEZ in pregnant women.
Multivariate analysis shows that the most dominant factor influencing the incidence of SEZ in pregnant women at Tanjung Unggat Health Center is hemoglobin levels. This emphasizes the importance of monitoring and intervention on the nutritional status of pregnant women, especially in maintaining normal hemoglobin levels. In addition, other factors such as employment, parity, and BMI also have a significant contribution to the incidence of SEZs and need to be considered in efforts to prevent and handle them.

**DISCUSSION**

Influence on nutritional status of pregnant women. In addition, research conducted by Lestari, et al (2018) also supports this result by showing that good knowledge about the nutrition of pregnant women can prevent the incidence of SEZ. Therefore, pregnant women need to have adequate knowledge about nutrition to maintain their nutritional status during pregnancy.

However, the results of this study are not in line with research conducted by Rini (2016) which states that there is no significant relationship between knowledge about nutrition and the incidence of SEZ in pregnant women. This study shows that knowledge alone is not enough to prevent SEZs, but there needs to be a good understanding of the importance of fulfilling proper nutrition during pregnancy.

Increasing knowledge about nutrition for pregnant women can be done through various ways, such as health counseling at puskesmas, education campaigns in the community, and health education programs integrated into the health care system. This is in line with research conducted by Mufida, et al (2019) which shows that education programs on nutrition for pregnant women can increase knowledge and awareness of pregnant women about the importance of nutritional intake during pregnancy.

In addition, the results of this study also support the opinion conveyed in the book Maternal and Child Nutrition that good knowledge about the nutrition of pregnant women is very important to maintain the health of the mother and fetus she contains. By having adequate knowledge, pregnant women can make healthy food choices and meet their nutritional needs during pregnancy.

Overall, the results of this study show that knowledge of pregnant women affects the incidence of SEZ, where pregnant women with good knowledge are less likely to experience SEZ compared to pregnant women who have less knowledge. Therefore, efforts need to be made to increase the knowledge of pregnant women about nutrition to prevent the incidence of SEZs and maintain the health of pregnant women and the fetuses they contain.

**CONCLUSION**

Based on the results of the study, it can be concluded that the factors that influence the incidence of chronic energy deficiency in pregnant women at the Tanjung Unggat Health Center in Tanjung Pinang City, Riau Islands, in 2023 are:

1. Age and education did not have a significant influence on the incidence of chronic energy deficiency.
2. Work influences chronic lack of energy in pregnant women.
3. Parity (number of times pregnant) has an influence on chronic energy deficiency in pregnant women.
4. Knowledge of chronic energy deficiency affects the incidence of chronic energy deficiency in pregnant women.
5. Body Mass Index (BMI) has an influence on chronic energy deficiency in pregnant women.
6. Hemoglobin (Hb) levels also have an influence on chronic energy deficiency in pregnant women.
7. The most dominant influential factor is hemoglobin levels. The results showed that abnormal Hb levels (lower than 11 grams) can increase the risk of chronic energy deficiency events by 15,591 times.

**Suggestion**

The suggestions from this study are:

1. Health Workers at Tanjung Unggat Health Center Tanjung Pinang City, Riau Islands
   - It is recommended that health workers provide better services with early detection through Antenatal Care (ANC) visits at least 6 times during pregnancy. Pay attention to the nutritional status and hemoglobin (Hb) levels of pregnant women and intervene if problems are found.
2. Pregnant Women at Tanjung Unggat Health Center Tanjung Pinang City
   - It is recommended to routinely check pregnancy with health workers, and take blood-added tablets (90 iron tablets) and pregnant PMT biscuits to meet nutritional needs.
3. Next Researcher
   - It is recommended to develop research with qualitative analysis to understand other factors that affect SEZ in pregnant women, increasing understanding of the management of the condition.
REFERENCES


