JISE
JOURNAL OF ISLAMIC STUDIES AND EDUCATION

Volume 01, Issue 01, 2022, pp 29-36

Submission Code: 63	Submitted	: June, 19 2022	Revised	: June, 20 2022
	Accepted	: June 21, 2022	Published	: October, 03 2022

The Importance of Nutritional Food Education for Pregnant Women

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Abstract

The nutritional needs of pregnant women in each trimester are different, this is adjusted to the growth and development of the fetus and the health of the mother. The purpose of this research was to determine the importance of nutrition for pregnant women. The method used in this research is literature review. Selection of journal articles according to inclusion criteria and exclusion criteria. The inclusion criteria in this study included journals on nutrition for pregnant women, pregnant women with anemia, pregnant women with chronic lack of energy, journal articles in the last 5 years. Exclusion criteria included pregnant women who consumed nutritious food. The keywords searched were "Nutrition", "Pregnant women" and "Knowledge" The results of this study found that nutrition in pregnant women can cause disturbances to pregnant women and also the fetus they contain. Nutrition in pregnant women is influenced by knowledge, the higher the knowledge of pregnant women, the lower the risk of pregnant women being affected by disorders during pregnancy, pregnant women should eat a lot of foods that contain protein, vegetables and fruits that contain lots of vitamins. If nutrition is inadequate, it will cause various complications of pregnancy, including anemia, chronic lack of energy, premature birth, low birth weight (LBW), bleeding during delivery and infection.

Keywords: *pregnancy knowledge, health education, food nutrition*

INTRODUCTION

The most important part of a woman's life is pregnancy. A pregnant woman is required to provide nutrition for her fetus and herself. The nutritional needs of pregnant women in each trimester are different, this is adjusted to the growth and development of the fetus and the health of the mother. Nutritional needs in the first trimester prioritize quality than quantity of food. That's because in this time there was the formation of vital organs and usually mother experiencing morning sickness (Riang et al., 2021).

Pregnant women's needs reached 80.000 calories during pregnancy. The food eaten by pregnant women is used to meet the nutrition. Foods consumed by pregnant women must contains protein, calcium, carbohydrates, fiber, vitamins and minerals. Carbohydrates source comes from wheat, rice, corn and others. Calcium can be found in dairy products. Protein comes from animal protein and plant based protein. Animal protein like meat, chicken and fish. Plant based protein like *tempe* and the others. Fiber, vitamin and minerals can be found in vegetables and fruits. The need for iron to pregnant women is very important. Iron substance are used for fetal and erythrose formation, muscle building and brain building. If the pregnant women deficiency iron will cause an anemia. Anemia to pregnant women having a risk of birth premature (Nyoman,2019)

Nutritional deficiencies in pregnant women can cause any problems. It is abortus, low birth weight, babies born prematurely and even caused baby death. During the labor process can result in a long labor process, causing bleeding risk, infection and any problems can cause surgery. Instead, consuming excessive food during pregnancy can make obesity, big bby was born and pre-eclampsia (pregnancy poisoning). Nutrients must be considered specially during pregnancy and breastfeeding because nutrients has an important role for fetal growth and development (Amil, 2022).

Nutritional needs of pregnant women is closely related to the level of knowledge of pregnant women about nutrition. The low level of knowledge causes mothers to not understand how to fulfill the nutrition needed by pregnant women during pregnancy. Factors that affect nutritional intake include the family's ability to buy food, knowledge and attitudes of mothers about nutrition. Therefore, attention to nutritional intake during pregnancy is one of the important things in monitoring health during pregnancy. One form of activity that can be carried out during antenatal visits is to provide health education, especially to mothers with their first pregnancy, so that the risk of nutritional deficiencies can be detected early (Anitasari, 2018).

The prevalence of Chronic Energy Deficiency due to malnutrition in pregnant women in Indonesia according to Riskesdas 2018 is 17.3% (Riskesdas, 2018). It is meaning the prevalence of malnutrition in pregnant women is still quite high and the importance of pregnant women knowing the nutrients needed during pregnancy, it can be concluded that education on the importance of nutrition for pregnant women is still very much needed at this time. From the data above, researcher want to explain “the Importance of Nutritional Food Education for Pregnant”**.**

METHOD

The method used in this research is literature review. Literature review, which is a series of processes in analyzing, evaluating, and synthesizing research findings, theories, and practices from several research sources related to the focus of the research to be carried out Literature review research provides a comprehensive, critical, and accurate understanding of the current state of knowledge, compares the differences between research and theory, reveals gaps in the research carried out, and shows what needs to be done to advance the research being carried out (Marzali, 2017).The selected journals include research on nutritional education for pregnant women. This literature journal is compiled from research published online. The search criteria included published journals published from 2017-2022. Selection of journal articles according to inclusion criteria and exclusion criteria. The inclusion criteria in this study included journals on nutrition for pregnant women, pregnant women with anemia, pregnant women with chronic lack of energy, journal articles in the last 5 years. Exclusion criteria included pregnant women who consumed nutritious food. In the process of searching for journal articles using Google Scholar (15 articles). The keywords searched were "Nutrition", "Pregnant women" and "Knowledge". In total, the authors received 17 journal articles and then selected according to the inclusion criteria into 4 published articles.

RESULT AND DISCUSION

Below are the results of a literature review on the importance of nutrition education in various problems of pregnant women, which aims to determine the importance of nutritious food for pregnant women.

Table 1. Journal Matrix

Title	Problem	Variable	Data Source	Methodology	Result
KNOWLEDGE OF PREGNANT WOMEN ABOUT	How does adequate nutritional intake	1. Dependent variables: nutrition,	Research in Sudalarang Village, Sukawening	The research method used is descriptive. The total	The results of the study in Sudalarang

NUTRITION DURING PREGNANCY IN ONE VILLAGE IN GARUT DISTRICT	affect pregnancy?	pregnant women, 2. Independent Variable : Knowledge of pregnant women.	District, Garut Regency. The Population taken in total sampling was 29 respondents. Data collection was carried out using test instruments in the form (paper based test)	sampling population was 29 respondents. The data collection method was carried out using a test instrument and data processing was carried out by the percentage distribution method	Village, Sukawening District, Garut Regency showed that most of the knowledge levels of pregnant women about nutrition during pregnancy could be categorized as good (69.0%).
THE RELATIONSHIP OF KNOWLEDGE FACTORS WITH THE EVENT OF ANEMIA IN PREGNANT WOMEN	How to reduce the incidence of anemia in pregnant women?	1. Independent variable: knowledge factor 2. Dependent variable: anemia, pregnant women	This research was conducted in the puskesmas area. This type of research is descriptive correlative with a cross sectional study design. The population in this study were all pregnant women, the sampling technique used purposive sampling, as many as 64 respondents, the data collection tool was a questionnaire. Data analysis was carried out using the chi square test.	This research includes a correlative descriptive study which was carried out from 20 June to 11 July 2018 at the Darussalam Health Center, Aceh Besar. The sample in this study were 64 respondents third trimester pregnant women who were selected by purposive sampling technique.	The results of the study found that there was a relationship between the knowledge factor with the incidence of anemia with a p-value of 0.017 (<value 0.05). This research was conducted by 64 respondents .

RELATIONSHIP OF KNOWLEDGE WITH THE NUTRITIONAL STATUS OF PREGNANT WOMEN IN TANJUNG PINANG PUSKESMAS, JAMBI CITY	How to solve the problem of nutritional status of pregnant women at the Tanjung Pinang Public Health Center, Jambi City?	1. Independent Variable : knowledge 2. Dependent variable: nutritional status, pregnant women	The population in this study were all pregnant women who had their pregnancy checked at the Tanjung Pinang Health Center in 2016. The sample was 62 respondents using the Quota sampling technique.	The research design used was descriptive correlation research. The population in this study were all pregnant women who had their pregnancy checked at the Tanjung Pinang Health Center in 2016. The sample amounted to 62 respondents using the Quota sampling technique, namely by determining a number of sample members in a quotum or quota.	The results of the study concluded that there was a significant relationship between mother's knowledge and nutritional status of pregnant women at Tanjung Pinang Health Center Jambi City in 2016. The results showed that the majority of respondents had good nutritional status, namely 51 pregnant women (82.3%) and a minority of respondents who had poor nutritional status, namely 11 pregnant women. Knowledge of nutrition in pregnant women, 31 respondents (50%) have good knowledge. Based on the Chi Square test, there

					is a relationship between knowledge and nutritional status of pregnant women at the Tanjung Pinang Health Center, Jambi City. (p = 0.00).

The Importance of Nutrition to Prevent Anemia in Pregnant Women

Anemia in pregnant women often occurs due to major changes in the hematological system during pregnancy, often occurs at the end of pregnancy because blood plasma volume increases about 45% (about 1250 ml) from normal. WHO reports that the prevalence of pregnant women worldwide who experience anemia is 41.8%. A pregnant woman is said to be anemic if she has a hemoglobin (HB) level of less than 11 g/dL. Signs and symptoms of anemia in pregnancy include weakness, fatigue, lack of energy, lack of appetite, decreased concentration power, headaches, easily infected with disease, decreased stamina, dizzy vision, pale mucous membranes of the eyelids, lips and nails. Based on the results of research conducted (Suhartati et al., 2017) it was found that 60 pregnant women (55.6%) gave birth to low birth weight (LBW) babies as many as 31 babies (51.6%) and gave birth to babies. with normal weight as many as 29 people (48.3%). Thus, 48 mothers who were not anemic (44.4%) gave birth to 5 babies with low birth weight (10.4%) and 43 babies who gave birth to normal births (89.5%). This shows that anemia has a relationship with the incidence of low birth weight babies (LBW) in accordance with the theory which states that several factors that influence the occurrence of LBW include maternal, fetal and environmental factors. Maternal factors include age, history of pregnancy, social conditions and poor nutritional status during pregnancy. The factor that directly affects the incidence of LBW is undernutrition status during pregnancy which can be measured from the anemia status of pregnant women.

Prevention of anemia in pregnant women by increasing the consumption of iron and natural sources, especially foods from animal sources that are easily absorbed such as liver, meat, fish. It also needs to be improved, foods that contain lots of Vitamin C and Vitamin A (fruits and vegetables) to help absorb iron and help the process of forming Hb. Fortification of foodstuffs is adding iron, folic acid, vitamin A and essential amino acids to foodstuffs that are widely eaten by the target group. The addition of iron is generally carried out in foodstuffs produced by the food industry. Iron-folate supplementation regularly for a certain period of time, aims to increase Hb levels quickly. Then, iron supplementation is only one of the efforts to prevent and overcome iron deficiency which needs to be followed in other ways (Sulistyaningsih & Yuliyanti, 2017).

The Importance of Nutrition to Prevent Chronic Energy Deficiency in Pregnant Women

Chronic energy deficiency is a condition of pregnant women who suffer from chronic (chronic) malnutrition with various health problems in pregnant women. Inadequate energy and protein intake in pregnant women can lead to chronic energy deficiency. Pregnant women with chronic deficiency if the upper arm circumference (LILA) is less than 23.5 cm.

According to a book written by Kristinasari entitled "Nutrition of Pregnant Women" states that the fetus in the womb needs food and only the mother can provide it, so that the

food for pregnant women must be sufficient for both the mother and the fetus in the womb. Adequate food containing nutrients during pregnancy is very important. If the amount of food is reduced, the baby born will be smaller. Adequate nutrition during pregnancy reduces risks and complications for the mother, and ensures the fetus grows so that the newborn has a normal weight.

According to a book written by Moehji entitled "Nutrition" states that malnutrition due to improper food management has a negative impact not only on mothers but also on the birth of children. If the mother experiences chronic energy deficiency during pregnancy, it will cause problems for both the mother and the fetus, such as the following:

a. Malnutrition during pregnancy can cause risks and complications for the mother, including anemia, bleeding, the mother does not gain weight normally, and infections.
b. Childbirth, the impact of malnutrition on the labor process can cause difficult and prolonged labor, preterm labor, postpartum hemorrhage, and surgical deliveries tend to increase.
c. Fetal malnutrition in pregnant women can affect the process of fetal development and can cause miscarriage (miscarriage), new-born death, birth defects and fetal anemia, intrapartum asphyxia (death in the womb), birth with low birth weight

According to (Septian, 2018) there are several ways to prevent chronic energy deficiency in pregnant women, including increasing the consumption of nutritious foods that contain lots of iron from animal foods (meat, fish, chicken, liver, eggs) and plant foods (dark green vegetables, nuts, tempeh), then you can also eat vegetables and fruits that contain lots of vitamin C (such as *katuk* leaves, cassava leaves, spinach, guava, tomatoes, oranges and pineapples) which are very useful for increasing iron absorption in the body. To increase the intake of iron in the body by taking blood-boosting tablets. To prevent the risk of chronic energy deficiency in pregnant women, pregnant women must have good nutrition for example with a minimum LILA of 23.5 cm.

The importance of knowledge the nutritional status of pregnant women

Knowledge is the result of knowing, and this happens after a person feels a certain thing. Knowledge of pregnant women can be obtained through formal education and non-formal education. For example, formal education can be obtained through schools. Meanwhile, non-formal education can be obtained through information such as media, counseling or socialization by health workers from the health office or from local health center (Puspitasari, 2016)

Education greatly affects a person's knowledge, the higher the level of education, the easier it is to obtain information from other people and from the media. According to Notoatmodjo, information is one of the external factors to gain knowledge. Individual knowledge greatly influences their daily health behavior (Puspitaningrum et al., 2017)

Based on research (Zaitun & Gorontalo, 2017) it was found that pregnant women who do not get sufficient knowledge about pregnancy often experience problems during pregnancy. Knowledge of pregnant women also affects their behavior in maintaining pregnancy. Mothers who are experiencing their first pregnancy are usually very careful about their pregnancy by diligently consuming nutritional intakes for daily life and is one of the causes of nutritional disorders. Most pregnant women do not know how to eat good food and what foods should pregnant women eat. The average pregnant woman at this time still does not understand the importance of the function of vitamins for mothers and children so they do not care about the importance of a vitamin and other nutritional intake. Knowledge of pregnant women about nutritional status is influenced by several factors, namely age, education, occupation, environment and a person's socioeconomic status. Knowledge of good nutrition for pregnant women will support a healthy pregnancy and good nutritional status.

Nutrition is one of the determinants of the quality of human resources. Malnutrition is a major factor in the failure of physical growth and intellectual development, reduces work productivity and decreases body resistance, which increases morbidity and mortality. Adequate nutrition is needed by every individual, since the fetus is still in the womb, infants, children, adolescence, adulthood to old age. Mothers and prospective mothers are a vulnerable

group because they need very adequate nutrition so that their nutritional and health status must be maintained in order to give birth to healthy babies. Aspects of nutritional knowledge include food and nutrition (definition, type, function, source, due to deficiency). Lack of nutritional knowledge results in reduced application of information in low nutritional status, it will be at risk of problems. The emergence of a problem regarding nutrition is caused by ignorance or lack of information obtained for pregnant women about nutrition during pregnancy. Malnourished mothers can increase the risk of miscarriage, perinatal death (fetal death from 22 weeks gestation to 1 week after birth) and neonatal (infants aged 0-28 days). Therefore, knowledge is very important so that the lifestyle and food consumed by pregnant women is in accordance with the nutritional needs of pregnant women. This is supported by the behavioral adoption process theory that behavior based on knowledge will be more lasting than behavior that is not based on knowledge.

CONCLUSION

Nutrition is important, especially during pregnancy because during pregnancy nutrition functions in the growth and development of the fetus. Nutrition in pregnant women comes from foods that contain lots of protein, vitamins and minerals. If the nutrition of pregnant women is met, then the pregnancy will go well. However, if the nutrition of pregnant women is not fulfilled, it will cause risks to the mother and fetus, including anemia in pregnant women, chronic lack of energy, low birth weight, premature birth and infections.

The risk due to malnutrition in pregnant women is often the first is anemia. Signs and symptoms of anemia in pregnancy include weakness, fatigue, lack of energy, lack of appetite, decreased concentration power, headaches, susceptibility to disease, decreased stamina, dizziness, vision, pale eyelids, lips and nails. Prevention of anemia in pregnant women by increasing the consumption of iron and natural sources, especially foods from animal sources that are easily absorbed such as liver, meat and fish. The second is chronic energy deficiency. Chronic lack of energy can cause malnutrition during pregnancy, relatively long labor that can cause postpartum hemorrhage, and in the fetus it can cause developmental disorders, not crying and born with low birth weight. Prevention of chronic energy deficiency is the same as preventing anemia in pregnant women, namely by consuming foods that contain lots of iron, both from plants and from animals.

Knowledge of pregnant women also affects their behavior in maintaining pregnancy. Pregnant women who get sufficient knowledge about pregnancy do not experience problems during pregnancy. On the other hand, pregnant women who do not get enough knowledge about pregnancy often experience problems during pregnancy.

For future researchers, it is hoped that they can improve this research by developing the content of this research. It is hoped that this research will be used as primary data to research the importance of nutrition for pregnant women.

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