



## Improving Maternal Health Through Pregnant Women's Nutrition Education in Pregnancy Women's Classes



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### Abstract

Lack of nutrition in pregnant women can cause abortion, low birth weight (LBW), premature birth, or even stillbirth during labor. Low levels of knowledge cause mothers to not understand how to fulfill the nutritional needs of pregnant women during their pregnancy. This activity aimed to increase pregnant women's knowledge of nutrition during pregnancy. The population was 10 pregnant women in the Pregnant Women's class in Kedungbanteng village. The method of the activity was to provide education through counseling, providing leaflets, and conducting pretest and posttest evaluations. The activity was carried out on Saturday, March 22, 2024, by a service team from Stikes Ganesha Husada Kediri. The results of the study showed that education for pregnant women increased knowledge about: Healthy eating patterns for pregnant women, benefits of healthy eating patterns for pregnant women, problems related to eating patterns for pregnant women, nutritional needs for pregnant women, signs and symptoms of malnutrition in pregnant women and the impact of nutritional status on the labor process. The result showed that before education, the number of pregnant women who had good knowledge was 3 people (30%), sufficient knowledge was 2 people (20%), and poor knowledge was 5 people (50%). After the intervention, the number of pregnant women who had good knowledge was 8 people (80%), sufficient knowledge was 1 person (10%) and poor knowledge was 1 person (10%). This revealed that education through pregnancy classes needs to be carried out and evaluated routinely by the midwife in charge, so that pregnant women have broad knowledge and insight and can make the right decisions in preparing for childbirth and the baby will be born healthy and safe as well as the mother healthy and safe without complications. The cadre mother should patiently provide assistance during pregnancy and childbirth.

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## INTRODUCTION

Pregnancy is a condition that occurs in a married woman. To meet the growth of their fetus, pregnant women need increased nutrition ([Shaleha et al., 2023](#)). The nutritional status of pregnant women shows how well a pregnant woman meets her nutritional needs. To meet the mother's own nutritional needs and the development of the fetus she is carrying, the nutrition of pregnant women is very important. Food needs are not limited to the portion consumed, but also to the quality of the nutrients contained in the food. One indicator that shows the nutritional status of the community is the level of nutrition of pregnant women. Nutritional deficiencies will occur if the food intake of pregnant women is not balanced with the needs of their bodies ([Maulu'ah et al., 2023](#)). Nutritional needs during pregnancy will increase by 15% compared to the needs of normal women. The food consumed by pregnant women will be used for fetal growth by 40% and the remaining 60% is used for maternal growth ([Maulu'ah et al., 2023](#)).

Demographically, the population of Kedungbanteng Village of productive age 20-49 years is around 1,850 (48.46%). The poverty rate in Kedungbanteng Village is quite high, around 79.98% of Heads of Families are included in the poor family category. Poverty affects the family's ability to provide nutrition for pregnant women. The results of the Basic Health Research ([Riskesdas, 2018](#)) conducted by the Ministry of Health show that around 45-50% of pregnant women in Indonesia do not get enough energy and protein intake. As many as 49.5% of pregnant women consume less than 80% of their protein needs during pregnancy and 44.8% of pregnant women also do not get enough energy intake in total, which is still below 70% of what is needed. In addition, an average of 20% of pregnant women also experience chronic energy deficiency with the highest percentage in Sikka Papua, with 27% ([Ministry of Health of the Republic of Indonesia 2012](#)) ([Jannah & Pratiwi, 2022](#)).

Low levels of knowledge cause mothers not to understand how to fulfill the nutritional needs of pregnant women during their pregnancy ([Ministry of Health of the Republic of Indonesia, 2022](#)). People are usually not aware of how important it is to maintain nutrition during pregnancy and the first two years of life. Women are also often unaware of how important it is to

maintain their nutrition ([Maulu'ah et al., 2023](#)). Lack of nutrition in pregnant women can cause abortion, low birth weight (LBW), premature birth, or even stillbirth during labor. Conversely, excessive food can cause excessive weight gain, large babies, and pre-eclampsia (pregnancy poisoning) ([Armiyati Nur et al., 2022](#)).

One way to reduce the incidence of abortion, LBW, and bleeding during labor is to provide health education to pregnant women about the importance of nutrition during pregnancy ([Armiyati Nur et al., 2022](#)). Conditions in remote areas are usually located in geographical locations that are difficult to reach, most of the population has basic education, low income, and lacks information technology. As a result, there needs to be educational efforts to improve the understanding, attitudes, and actions of pregnant women in rural areas regarding pregnancy care ([Sukartiningsih, 2020](#)). Knowledge plays an important role in shaping a person's behavior. Behavior driven by knowledge will produce good behavior. If a person's behavior is not driven by knowledge, then it is difficult to act and implement a healthy lifestyle, including ensuring the nutritional needs required during pregnancy ([Armiyati Nur et al., 2022](#)). For this reason, it is necessary to conduct counseling with the title "Health Education as an Effort to Increase Pregnant Women's Knowledge Regarding the Fulfillment of Nutrition and Balanced Nutrition"

## METHOD

This community service activity was carried out on Saturday, March 22, 2024 in Kedungbanteng Village, Bakung District, Blitar Regency by the Stikes Ganesha Husada Kediri service team; 4 lecturers consisting of 2 lecturers from the Nursing study program, 1 lecturer from the Midwifery study program and 1 lecturer from the Pharmacy study program. This service was assisted by 10 students consisting of 4 students from the Nursing Study Program, 3 students from the Midwifery Study Program, and 3 students from the Pharmacy Study Program, each of whom had different roles and duties in providing education to pregnant women. Education was also provided by the Village Midwife as the Person in Charge of the Area, while the cadre mothers were responsible for accompanying pregnant women from picking them up to ensuring they returned home safely. The participants in this pregnant women's class were 10

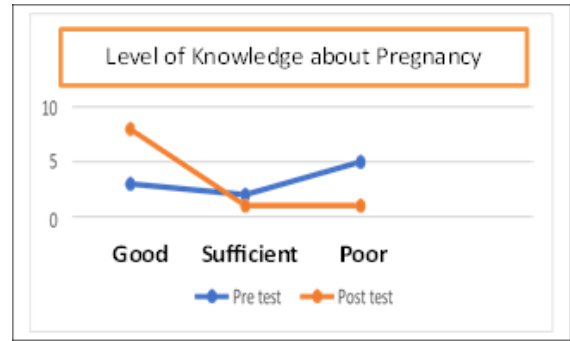
pregnant women in their first to third trimesters who had never attended the Pregnant Women's class.

Before providing education to pregnant women, the service team conducted a pretest. The material on Fulfilling Balanced Nutrition was delivered through lectures and discussions, the media used was Leaflets. The selection of leaflet media was expected so that pregnant women could repeat the contents of the material by reading it again at home. After the lecture, the service team provided an opportunity for discussion and Q&A. In the final session, the material was added by the midwife in charge of the Region. Underlining what pregnant women have done, what should be done and what the next steps are to maintain fetal health. After receiving material on Fulfilling Balanced Nutrition, the Pregnant Women class continued with Pregnancy Exercises led by Midwifery Study Program Students. Mothers were asked to take a sitting position on the carpet and the service team was involved in doing pregnancy exercises together. After completing the pregnancy exercises, the discussion session was reopened for the pregnancy exercise material. The event ended with a post-test and a conclusion of the material by the service team.

**RESULTS**

Community service activities by providing counseling to pregnant women in the first to third trimester by providing material in the form of leaflets regarding the fulfillment of nutrition and balanced nutrition for pregnant women. The activity went smoothly. Pregnant women were very enthusiastic in participating in the activity and during the discussion session they asked many questions, several women asked about medicines that should be taken as additional supplements, mothers also asked about the types of vegetables and foods that were recommended and the correct way to cook and serve them. The mother also conveyed several complaints during pregnancy such as dizziness, nausea that did not stop until TM III. All were answered well and the mother was satisfied with the explanation from the service team. The midwife also provided additional explanations at the end of the session.

The post-test results showed a change in the level of knowledge of pregnant women before being given education and after being given education.



**Figure 1.** Level of Knowledge of Pregnant Women About Pregnancy Nutrition Pre-test and Post-test

Health education on “Pregnancy Nutrition Education” can increase awareness of pregnant women regarding: Healthy eating patterns for pregnant women, benefits of healthy eating patterns for pregnant women, problems related to eating patterns for pregnant women, nutritional needs for pregnant women, signs and symptoms of malnutrition in pregnant women and the impact of nutritional status on the delivery process. Providing this education allows pregnant women to make decisions about the use of public health facilities, especially in the Pregnant Women Class in Kedungbanteng Village, Bakung District, Blitar Regency, to reduce malnutrition in pregnant women. This can be seen by summarizing the pre-test questions before counseling and the post-test questions after counseling. Before counseling, the number of pregnant women who had good knowledge was 3 people (30%), sufficient knowledge 2 people (20%) and insufficient knowledge 5 people (50%). After the intervention, the number of pregnant women who had good knowledge was 8 people (80%), sufficient knowledge 1 person (10%) and insufficient knowledge 1 person (10%). This shows that the participants are very enthusiastic about increasing their knowledge about the importance of nutrition for pregnant women.



**Figure 2.** Counseling on Fulfillment of Nutrition and Balanced Nutrition in Pregnant Women's Class in Kedungbanteng Village, Bakung District, Blitar Regency

Health education is designed to help individuals, groups, and communities maintain, improve, and protect their health by increasing knowledge, interests, and abilities in society, in society, and in society, in accordance with local cultural norms ([Ministry of Health of the Republic of Indonesia, 2012](#)).



**Figure 3.** Leaflet on Fulfilling Nutrition and Balanced Nutrition for Pregnant Women

Nutrition for pregnant women is a substance found in the food content of pregnant women. The growth of the fetus carried by a mother is influenced by the adequacy of nutrition during pregnancy. The quality of the baby born will be influenced by the nutrition consumed by the mother during pregnancy, in other words, if the mother consumes food that has sufficient nutrition, the baby born will be healthy, full-term, and of normal weight. The nutrition of pregnant women is one of the focuses of attention for community nutrition improvement activities because of its significant impact on the condition of the fetus they are carrying. The nutritional problem that is often encountered in pregnant women is the problem of chronic energy deficiency (CED).

Good nutritional intake for pregnant women can be realized from a diet with dense nutrients such as fruits, vegetables, legumes, grains, healthy fats with omega-3 fatty acids including nuts and seeds, and fish. The need for nutrients during pregnancy increases from both macro and micro nutrients. The need for macronutrients increases during pregnancy to maintain the mother's homeostasis while supporting fetal growth. Examples of macronutrients include energy and protein. In addition, micronutrients are also important for improving fetal development such as folic acid to prevent neural tube defects, iodine to prevent cretinism, calcium to prevent hypertensive disorders in pregnancy, especially in high-risk women or with low dietary calcium intake.

A pregnant woman's diet is important to meet her nutritional needs and the growth and development of the fetus in the womb. In fact, it is unlikely that the child will develop chronic diseases later in life. During pregnancy, the body undergoes many physiological and hormonal changes. A pregnant woman's diet affects her health and the fetus in her womb. Therefore, pregnant women need to meet their nutritional needs during pregnancy in order to have a healthy baby ([Goudet et al., 2019](#)).

The next activity after education is Pregnancy Exercise. Pregnancy exercise is a form of physical activity that can be done by pregnant women as an effort to maintain health while preparing for the birth of their baby. In pregnancy classes in Kedungbanteng village, in addition to pregnancy exercise, the level of knowledge of pregnant women is assessed periodically, and a discussion forum is opened through pregnancy classes every week. This activity has been running since before the Covid-19 pandemic in collaboration with the health center and one midwife is appointed to be responsible for the area.

This class for pregnant women is a new class, with new members because the old members have finished and have given birth, except for 1 person who is TM 3 who is just waiting for birth because she has entered the EDD. This pregnancy exercise went smoothly, during the pregnancy exercise activities, the mothers were enthusiastic about learning and asked many questions.



Pregnant Women's Class in Kedungbanteng Village, Bakung District, Blitar Regency

## DISCUSSION

The nutritional status of pregnant women shows how well a pregnant woman meets her nutritional needs. Maternal nutrition during pregnancy is very important. to fulfill the mother's own nutrition and the development of the fetus she is carrying. Food needs are not limited to the portion consumed, but also to the quality of the nutrients contained in the food. One indicator that shows the nutritional status of the community is the level of nutrition of pregnant women. Nutritional deficiencies will occur if the food intake of pregnant women is not balanced with their body's needs ([Maulu'ah et al., 2023](#)).

Improving the health of pregnant women is an important thing to pay attention to. Unhealthy pregnant women have an impact on imperfect fetal growth, fetal defects, and threats to the mother's safety during pregnancy, the birth process and the postpartum period. Educating pregnant women about nutrition during pregnancy through counseling activities at this pregnancy center is the right choice. Increasing knowledge through education is effective in changing healthy living behavior ([Juwariah T, 2018](#)).

Pregnant Women's Class is the right choice as a means to monitor health during pregnancy. Direct monitoring by the midwife in charge allows for speed and accuracy in handling the mother if unwanted things happen, because the midwife has been monitoring from the beginning of pregnancy, the midwife knows the mother's pregnancy history very well, so that it can shorten the time for assessment. Pregnant women's class will guide mothers in behaving healthily during pregnancy, in the pregnant women's class the mother is always evaluated not only for her health but also her knowledge and understanding of pregnancy,

childbirth and preparation for caring for a baby. Mothers who routinely attend pregnancy classes have the potential to maintain their health during pregnancy and childbirth. In this pregnant women's class, cadres are also formed to be persistent and fight in taking care of mothers during pregnancy, through a good approach mothers are motivated to attend pregnant women's class routinely, are responsible for bringing mothers and ensuring they go home safely including dropping them off if necessary.

The increase in mothers' knowledge about pregnant women's health can be seen from the difference in pretest and posttest results. Before the education was carried out, the number of pregnant women who had good knowledge was 3 people (30%), sufficient knowledge 2 people (20%) and poor knowledge 5 people (50%). After education, the number of pregnant women who had good knowledge was 8 people (80%), sufficient knowledge 1 person (10%) and insufficient knowledge 1 person (10%). This shows that the participants in the pregnancy class are very enthusiastic about increasing their knowledge about the importance of nutrition for pregnant women. The involvement of cadre mothers in presenting pregnant women to the pregnancy class in Kedungbanteng village is something that needs to be appreciated. Cadres make a real contribution in mobilizing the community, cadres provide assistance and provide motivation while mothers go through challenging times during pregnancy. Optimization of community empowerment needs to be increased because it has been proven to have a positive impact on improving health ([Juwariah T, 2020](#)).

## CONCLUSION

Education in this pregnancy class allows pregnant women to make decisions regarding the use of public health facilities, especially in the Pregnancy Class in Kedungbanteng Village, Bakung District, Blitar Regency, to reduce malnutrition in pregnant women, maintain health during pregnancy and prevent stunting. Participants were very enthusiastic in attending the pregnancy class and increasing their knowledge to improve their health. This can be seen from the difference in the results of the pre-test before the education was carried out and the post-test after the education was carried out. After the education was carried out, the number of

pregnant women who had good knowledge was 8 people (80%), sufficient knowledge was 1 person (10%) and poor knowledge was 1 person (10%). This shows that the participants were very enthusiastic about increasing their knowledge about the importance of nutrition for pregnant women.

### SUGGESTIONS

Pregnant women in Kedung Banteng Village should actively attend the pregnancy classes that are routinely held in Kedung Banteng Village. The midwife in charge ensures that 100% of pregnant women's health is monitored through the pregnancy class. Cadres help the person in charge to bring pregnant women to the pregnancy class by persuasively, picking them up and ensuring that the mothers go home healthy and safe. It is advisable to involve the family of pregnant women in motivating pregnant women to routinely attend pregnancy classes, especially husbands, parents and in-laws.

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### CONFLICT OF INTEREST

There is no conflict of interest in this service and publication.

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