Utilization of Green Bean Extract for Pregnant Women with Anemia at the Limboto Health Center, Limboto District, Gorontalo Regency

Ani Retni[1], Harismayanti[1]
[1]Nursing Professional Study Program, Faculty of Health Sciences, University of Muhammadiyah Gorontalo, Indonesia

Abstract. *Carrying out service with the theme of Utilizing Green Bean Extract for Anemia in Pregnant Women. carried out on pregnant women in the Limboto Health Center Work Area, Limboto district, Gorontalo Regency. For pregnant women, the nutritional content of green beans can be useful in preventing anemia. Iron is one of the minerals that has an important role in the formation of red blood cells. However, nuts usually contain phytic acid which binds minerals so they cannot be absorbed optimally. The process of soaking, cooking, and germination can reduce the content of this phytic acid and increase the digestible iron. The purpose of this activity in general is to improve the degree of public health through increasing knowledge of pregnant women about the use of mung bean juice for anemic pregnant women. Demonstrating the Steps of Making Green Bean Juice.*

Keywords: *Green Bean Extract, Pregnant Woman, Anemia*

INTRODUCTION

One of the dangerous conditions that are often experienced by pregnant women is anemia. Insufficient food intake, for example due to nausea and vomiting or lack of iron intake, can cause iron anemia (Eva, at all, 2010). Anemia is a disease caused by a deficiency of hemoglobin (Hb). A person is said to have severe anemia if he has a hemoglobin (Hb) of less than 10 g% (Pujiningsih, 2010). The large increase in blood volume means that additional iron is needed to make hemoglobin for the increased red blood cells. The more hemoglobin contained in the blood, the more oxygen that can be carried to various tissues including the placenta.

The World Health Organization (WHO) categorizes anemia in pregnant women as a worldwide health problem with a prevalence of 29.6 percent in 2018, while the prevalence of anemia in pregnant women in Indonesia has increased from 43.2% to 44.2% between 2017 and 2019. According to Basic Health Research Data (Riskesdas), the proportion of pregnant women with anemia increased from 37.1 percent to 48.9 percent between 2013 and 2018. It is not rare for iron deficiency and severe bleeding, the two most prevalent causes of anemia in pregnancy, to combine. Anemia is the most significant public health issue in the world, particularly for WUS (Novita et al., 2012). Iron deficiency anemia is a prevalent and pervasive issue in the realm of nutritional disorders around the world. The prevalence of iron deficiency anemia among children, nursing mothers, women of reproductive age, and pregnant women is still relatively high, at approximately two billion or more than thirty percent of the world's population (WHO, 2011).

Anemia is a significant public health concern, particularly in poorer nations. According to global data, the frequency of anemia in pregnant women increased to 40.1% between 2012 and

2016. In 2016, it was known that the prevalence of anemia in pregnant women was 32.4% in China, 50.1% in India, and 40.2% in Thailand (World Bank, 2016). However, it is reported that the anemia rate among pregnant women in Thailand has reduced to below 20% from 2015-2016 (Pongcharoen et al., 2017). Indonesia is one of the countries that gives a considerable percentage, 42 percent. Moreover, Riskesdas reported that in 2018, 48.9 percent of pregnant mothers had anemia. This is evidence that the anemia problem has not improved, but it has even increased in Indonesia.

Multiple factors contribute to anemia during pregnancy in poor nations. It has been shown that intestinal parasite infections, food diversity, low socioeconomic status, and parity are variables in the prevalence of anemia in pregnant women (Lebso et al., 2017). According to Xu et al. (2018), anemia is one of the causes of high morbidity and mortality during pregnancy since it can lead to premature birth, hypertensive problems, and low birth weight. The maternal and fetal effects of anemia include miscarriage, preterm birth, low birth weight infants, postpartum hemorrhage, and even death (Getahun et al., 2017).

In order to determine the prevention and treatment of anemia, it is necessary to consider the causative variables; if the reason is a nutritional problem, an assessment of nutritional status is required to determine which nutrients play a role in anemia instances. Several important elements involved in the synthesis of hemoglobin can lead to nutritional anemia (Kapur et al., 2002). Fe deficiency, which is common in the world, is the cause of nutritional anemia, so to prevent iron deficiency, iron intake and foods containing iron are needed according to one's needs.

The need for iron in pregnant women is not only in the first trimester of pregnancy, but during pregnancy the mother needs iron to meet the needs of the fetus and mother (Fisher & Nemeth, 2017). In addition to consuming Blood Add Tablets, pregnant women can consume food sources, one of which is from nuts which are known to be high in iron content. One of these food sources is green beans.

Green beans are a type of legume that is high in iron (Vigna radiata). Green beans are extremely useful for the health of pregnant and breastfeeding women, as well as children's growth (Akbar, 2015). The majority of the iron in green beans is located in the embryo and seed coat, with a total iron level of 6.7 mg/100g of green beans. Peanut juice is one of the most effective ways to serve green beans. The water and sediment are filtered and separated so that the beverage is nutrient-rich.

This practice involves inviting pregnant women to participate in counseling activities. The execution of this outreach was also observed by a facilitator who was responsible for evaluating the presenters. This outreach effort aims to enhance pregnant women's awareness of the benefits of mung bean juice for anemic pregnant women.

METHODS

The steps of the method for implementing community service activities are as follows: (1) Separation of community service organizations. (2) Consultation with the lecturer in charge. (3) Consultation with the Director of the Health Center in Limboto. (4) Preparation of extension activity tools and materials. Preparation and counseling materials for pregnant women comprise (1) the preparation of materials to be distributed as counseling. (2) The implementation methodology in the form of extension-specific methods. (3) Providing information on the use of mung bean juice for anemic pregnant women. (4) Give a demonstration on how to make green bean juice. Five Questions and Answers. (6) Activity Recordkeeping. Ners XII students will administer green bean juice to pregnant mothers suffering from anemia at the Limboto Health Center, Limboto District, Gorontalo Regency, as part of their community service. This activity employs a percentage of pamphlets, lectures, and conversations accompanied by documentation, resources, and a list of participants.

RESULTS AND DISCUSSION

Standard Operational Procedure for Making Green Bean Juice for Pregnant Women.

Standard Operating Procedure	Making Green Bean Juice for Pregnant Women
Defenition	Green beans contain folic acid that pregnant women need. The benefits of green beans for pregnant women include maintaining heart health and helping prevent anemia. Anemia during pregnancy is very dangerous, because of the risk of causing bleeding during childbirth and also miscarriage. The benefits of green beans for pregnant women is to prevent anemia. By consuming green beans, anemia can be avoided because of the presence of iron which helps the process of forming blood hemoglobin.
Aim	Providing health information to pregnant women about the benefits of consuming green bean juice during pregnancy to help prevent anemia
Patient Preparation	1. BHSP 2. Give a calm explanation. Education to be given
Tools Preparation	1. Leaflet
Ways of working	Tools and Materials 1. Green beans 200 grams 2. Brown sugar 100 grams 3. Pandan leaves 4. Cinnamon (Optional) 5. Salt to taste 6. Boiled water 3-4 liters of water How to make: 1. Soak the mung bean granules using hot water, try not to be too long. 2. Just use low heat when boiling the shark nuts 3. Add pandan leaves during the boiling process to add aroma. 4. Add brown sugar or palm sugar to make it healthier and add flavor. 5. Add cinnamon and other ingredients to add flavor to the rawsa green bean juice. 6. Taste test, when it's just right, remove the pan. Prepare a sieve to filter the mung bean grains and get the water in the form of juice.
Expected Outcomes	Closing: 1. Perform validation evaluation 2. Concluding material and closing 3. Greetings

Counselling Material

Green Bean Content

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pregnancy is very dangerous, because of the risk of causing bleeding during childbirth and also miscarriage. The benefits of green beans for pregnant women is to prevent anemia. By consuming green beans, anemia can be avoided because of the presence of iron which helps the process of forming blood hemoglobin.

Benefits of consuming green bean juice for pregnant women

One of the main benefits of consuming green beans is as a daily intake of nutrients and nutrients. These nutrients are not only useful for meeting the needs of the mother, but also for the development and growth of the fetus in the womb. Green beans contain complete nutrition, including complex carbohydrates which can be the greatest energy supply for a mother to carry out daily activities during pregnancy. As for the fetus, the calcium in green beans, which amounts to about 1.4 grams and iron can prevent bone disorders that are prone to be experienced by pregnant women. The presence of folic acid in green beans is very useful for preventing birth defects. Some abnormalities that often occur when a baby is born, including cleft lip, heart defects, to impaired brain function as a result of not fulfilling folic acid intake.

One of the causes of anaemia in pregnant women is the lack of vitamin B12 and folic acid during pregnancy. Both of these substances can be obtained by consuming green beans, thereby preventing blood deficiency during childbirth. Not only that, the iron content of green beans is able to help the process of forming blood haemoglobin. Pregnant women are prone to cell damage during the delivery process. In particular, it can occur in the area of the birth canal. Therefore, the wound healing process can be accelerated by consuming the protein contained in green beans. The reason is, the protein content of this type of bean is very high, even included in the protein complex. This substance is also needed by the fetus in its growth period, so it is better to consume it from the early stages of pregnancy.

Monday, February 21, 2022 is the implementation date for this service. The steps of reaching the desired outcomes are detailed according to a sequence of implementation methods, with many adjustments based on field conditions, and are elaborated on in the following section. The academic supervising lecturer met with the Head of the Limboto Health Center to prepare for the placement of service students and to discuss the situation and condition of the Limboto Health Center Work Area for Nurses XII Professional students. The following are the stages of implementing outreach activities on the Use of Green Bean Extract for Pregnant Women with Anemia in the Work Area of the Limboto Health Center, Limboto District, Gorontalo Regency:

Implementation of Extension

The Working Area of the Limboto Health Center, Limboto District, Gorontalo Regency, with mung bean extract counseling participants for pregnant women. The implementation took place at the Bulota Village Office as the location for the Posyandu (Post Integrated Health Service) to be carried out.

Counseling and Demonstration of Making Green Bean Juice

This activity was attended by academic supervisors and pregnant women in the Limboto Health Center Work Area in Bulota Village. Counseling is aimed at increasing knowledge of the use of mung bean juice in anemic pregnant women and knowing how to make mung bean juice.

The Results Achieved

The Limboto Health Center is very appreciative and appreciative of the results of this activity because the Muhammadiyah University of Gorontalo, particularly the Nurse Profession Study Program, was instrumental in carrying out this activity. All series of activities have been carried out with good results because as many as 20 pregnant women were willing to attend counseling, and according to reports of evidence of activities carried out.

CONCLUSION AND SUGGESTION

From the series of community service activities for the XII Nurses Student, which were conducted in collaboration with the dedication of the S1 Nursing lecturer at the Muhammadiyah University of Gorontalo, it can be concluded that pregnant women now have a greater understanding of the use of green bean juice in anemic pregnant women and are more likely to consume iron-rich foods that can increase hemoglobin levels.

It is hoped that all Nursing Lecturers at the Muhammadiyah University of Gorontalo can carry out similar activities and contribute thoughts and channel for pregnant women to always check their health at the nearest health facility, so that pregnant women can find out if there is a lack of hemoglobin that can harm the mother and the fetus being conceived.

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