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THE ROLE OF BAKTI GAMIA PRODUCT AS ANEMIA PREVENTION IN PREGNANT WOMEN AT TPMB JAMILA, SOUTH JAKARTA

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Abstract

In the initial quarter of 2024, the percentage of pregnant women with anemia receiving ANC at TPMB Jamila in RW. 03 South Jakarta was recorded at 11% (31 individuals out of 279 pregnant women). Addressing this issue, an approach to tackle anemia in pregnant mothers involves education and intervention. This community initiative aims to enlighten pregnant women about the significance of consuming iron-rich foods and enhancing iron absorption to mitigate anemia during pregnancy. The endeavor involves data collection, identifying priority concerns, developing educational materials, and providing product interventions. Evaluation is conducted through discussions and Q&A sessions. A total of 14 pregnant women and 6 additional participants, including lecturers, midwives, and cadres, engaged in the counseling sessions, which were carried out collaboratively with team members. Notably, participants exhibited high levels of enthusiasm and participation throughout the activities.
Keywords: Anemia Of Pregnant Women, Chicken Liver, Red Guava

INTRODUCTION

Anemia poses a significant health challenge worldwide. According to data from the 2018 Basic Health Research, the prevalence of iron deficiency anemia among pregnant women in Indonesia is 48.9%, marking an 11.8% increase compared to data reported in 2013. Anemia during pregnancy is linked to heightened risks of complications such as preeclampsia, postpartum hemorrhage, infections, and prolonged hospitalization. Additionally, in fetuses and newborns, iron deficiency anemia can lead to impaired fetal growth, low birth weight, and premature birth (Wibowo, 2021).

One notable source of animal-based nutrition, rich in heme iron and readily accessible to people, with superior bioavailability compared to iron sources derived from leafy greens and nuts, is meat, fish, and poultry, particularly the liver. Chicken liver, in particular, contains a form of iron that the body absorbs directly, unaffected by inhibitory compounds (Purwandari, 2022). Notably, chicken liver boasts a substantial iron content, namely 15.8 mg per 100 grams (MOH RI, 2023). Moreover, minerals found in chicken liver are readily assimilated because they contain fewer mineral-binding agents. Recognized as a storage of iron, it serves as a crucial source for preventing anemia (Purwandari, 2022).

Chicken liver boasts considerable iron content, approximately 8.99 mg per 100 grams. Moreover, minerals derived from chicken liver are readily absorbed due to the limited presence of mineral-binding agents. Numerous studies have demonstrated the effectiveness of chicken liver in raising Hb levels. Research conducted by Kurnia in 2023 revealed a notable difference in the average change of hemoglobin levels among pregnant women in the treatment group, registering at 2.42 g/dl, compared to 1.30 g/dl in the comparison group. The administration of steamed chicken liver sponge cake, using

green bean flour and sweet potato as a replacement, exhibited a discernible impact on hemoglobin levels among anemic pregnant women at the Sukarami Health Center in Palembang. Pregnant women require approximately 60 grams of protein daily, obtained from both animal and vegetable sources. Protein plays a pivotal role in facilitating iron transportation within the body. Consequently, inadequate protein intake may impede iron transport, leading to iron deficiency (Kurnia, 2023).

Findings from another study carried out by Evayanti in 2018 revealed that the mean hemoglobin level before the administration of chicken liver stood at 9.10 gr/dl, whereas in post-administration, the average hemoglobin level surged to 10.97 gr/dl (Evayanti, 2018).

Guava (*Psidium guajava*) is recognized for its unique composition where seeds are densely packed within the central portion. The mineral content present in guava fruit offers potential benefits for individuals dealing with anemia, particularly due to its ability to aid in hemoglobin synthesis within red blood cells. Choosing guava fruit is considered advantageous for enhancing iron absorption, as it serves as a rich source of vitamin C compared to other fruits. Yusnaini (2014) elaborated on the significant role of vitamin C in promoting iron absorption within the body. Vitamin C can convert ferric iron (Fe^{3+}) to ferrous iron (Fe^{2+}) within the small intestine, thereby facilitating its absorption. This conversion process is notably enhanced in an acidic environment, which can be achieved through the acidity induced by vitamin C. Vitamin C further influences the pH levels in the stomach, thereby augmenting the iron absorption process by up to 30%. Research conducted by Rusdi et al. (2018) underscored variations in hemoglobin and ferritin levels between adolescent girls with anemia who were administered red guava juice and those who were not. Another study by Syamsuryanita and Ikawati (2020) demonstrated the positive impact of red guava juice on hemoglobin level alterations among first-trimester pregnant women.

Guavas boast a higher vitamin C content compared to oranges. A 100-gram serving of guava fruit contains 183.5 mg of vitamin C, whereas the same quantity of oranges contains approximately 50-70 mg of vitamin C (Rusdi, 2018).

Guava (Psidium Guajava L) is a fruit characterized by its thin skin and smooth to rough surface. When ripe, it has soft flesh, while unripe ones have firm and crunchy flesh. The fruit taste ranges from sweet to less sweet and bland, depending on the variety and cultivation methods. In terms of nutritional content, every 100 grams of guava fruit provides 49 calories of energy, 0.90 grams of protein, 0.30 grams of fat, 12.20 grams of carbohydrates, 14 mg of calcium, 28 mg of phosphorus, 5.6 grams of fiber, 4.0 RE of vitamin A, vitamins B1 and B2 at 0.05 mg, 1.10 mg of iron, and 87 mg of vitamin C (Mustika, 2021). Research conducted by Mustika in 2021 explored the impact of guava consumption on hemoglobin (Hb) levels in anemic pregnant women at BPM Okdiah Betty, Trimurjo District, Central Lampung Regency. It was found that consuming guava can elevate hemoglobin levels in pregnant women, thereby helping to prevent anemia during pregnancy. It is suggested that pregnant women

incorporate guava into their diet as it is rich in vitamin C, which enhances iron absorption, thus maximizing iron uptake and reducing the risk of anemia.

In this activity, the intervention provided was a food menu called BAKTI GAMIA, an abbreviation for *Bakso Hati Guava Cegah Anemia* (Guava Liver Meatballs to Prevent Anemia). BAKTI GAMIA involves distributing liver meatballs and red guava pudding, both of which are affordable and readily available within the community. Administering chicken liver meatballs to pregnant women aims to raise their hemoglobin levels, aligning with findings from Nurlinda's research (2022), which suggests that consuming chicken liver effectively boosts blood hemoglobin levels. This is attributed to the presence of a type of iron in chicken liver that is readily absorbed by the body, unaffected by inhibitory substances (Purwandari, 2022). Red guava fruit serves as a means to enhance iron absorption, as it is rich in vitamin C. The vitamin C content in guava fruit aids in the absorption of iron found in chicken liver. Consistent consumption of "BAKTI GAMIA" is anticipated to elevate hemoglobin levels and mitigate the risk of anemia among pregnant women.

METHOD

The location chosen for this community service is TPMB Jamila, situated within the Attorney General's Office Building in Pasar Minggu, South Jakarta. The duration of the service spans over 3 weeks. The tools utilized include educational materials such as PowerPoint presentations, distribution of leaflets, and practical demonstrations on crafting liver meatballs and red guava pudding. This community service entails data collection, identification of priority issues, preparation of educational resources, and implementation of interventions featuring chicken liver meatballs and red guava pudding. Evaluation is conducted through discussions and Q&A sessions. A total of 14 pregnant women and 6 additional participants, including lecturers, midwives, and cadres, actively engaged in the counseling sessions, which were facilitated by team members.

RESULTS AND DISCUSSION

Planning Stage

The planning process commences by first submitting a proposal followed by obtaining an activity permit. Before commencing the activity, the community service implementation team conducted an initial visit to the activity site at TPMB Jamila to identify pregnant women. They facilitated a Forum Group Discussion (FGD) to ascertain the number of participants, organize the venue and necessary facilities, gather materials, prepare counseling aids, and invite pregnant women by distributing event invitations. Subsequently, they strategized the implementation of activities.

Implementation Stage

The community service implementation team executed community service activities by first delivering educational material in the form of PowerPoint, product demonstrations, leaflet distribution, and providing intervention products like chicken liver meatballs and red guava pudding.

Evaluation Stage

Following the completion of the implementation phase, an evaluation process is undertaken to gauge the extent of the impact resulting from the execution of community service activities. This evaluation encompasses methods such as responding to post-test inquiries, engaging in discussions, and addressing questions from all participants involved. Twenty individuals partook in the community service counseling, comprising 14 pregnant women, 4 *Posyandu* cadres, 1 lecturer, and 1 midwife. Participants demonstrated high levels of engagement in answering queries and effectively conveying the provided material. The community service activity was meticulously organized and proceeded seamlessly in alignment with the prepared activity plan. Through the conducted questions and answers session, it became evident that the activity had a significant positive impact, particularly on pregnant women, by enhancing their understanding of anemia, iron-rich foods, and the importance of consuming Liver Meatballs and Red Guava Pudding to prevent anemia during pregnancy. The findings align with Lestari's research from 2023, which highlighted the effectiveness of guava consumption in increasing hemoglobin levels among pregnant women.

This activity aims to improve health status through promotional efforts by providing education on anemia to pregnant women. Education on the prevention and treatment of anemia in pregnant women is an effort to convey information about the importance of preventing and treating anemia which can increase knowledge and attitudes so that it makes it easier for them (pregnant women) to behave healthily, prevent anemia, and if anemia occurs, they can treat it immediately (Mamuroh & Nurhakim , 2019). Through health education, pregnant women will understand more about what anemia is, what the signs and symptoms are, and how to prevent it, and a better understanding of the various types of food ingredients that contain high levels of iron, inhibitory substances, or those that can help the absorption of iron, in addition to consuming additional tablets, blood as an effort to increase hemoglobin in pregnant women. It is hoped that in the future health workers can provide intensive education about anemia in pregnant women using various information media such as leaflets or pamphlets, PowerPoint presentations, or demonstrations so that pregnant women can undergo the pregnancy process healthily, the fetus can grow and develop perfectly according to its gestational age.

Figure 1. Health Education and Introduction to Bakti Gamia Products

Figure 2

Pregnant Women Following Counseling and Reading Leaflets About Preventing Anemia in Pregnant Women

Figure 3. Question and Answer Discussion and Door Prize Distribution

Figure 4. Distribution of Bakti Gamia Products

Figure 5: Group Photo Session

CONCLUSION

Through this activity, pregnant women gained knowledge and comprehension regarding BAKTI GAMIA (Liver Meatballs and Guava Pudding for Anemia Prevention) as a means to elevate hemoglobin levels and forestall anemia during pregnancy. This community service endeavor progresses through the stages of planning, implementation, and evaluation. Planning commences with proposal submission and activity permit issuance. The implementation team conducts preliminary visits for data collection and pregnant women identification, engaging in FGDs with pertinent stakeholders. During the implementation phase, educational materials, demonstrations, and intervention products are provided. In the evaluation phase, the impact of activities is assessed through post-test inquiries, discussions, and Q&A sessions. Notably, participants exhibited marked enthusiasm and engagement during these sessions, indicative of heightened understanding and knowledge regarding anemia prevention methods, including the consumption of BAKTI GAMIA.

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