

Overcome Anemia in Pregnant Women With Counseling and Giving Beetroot Juice to Prevent Anemia

Febry Mutiariami Dahlan^{1*}, Iis Sehan², Intiani Kusuma Dewi³, Lina Roslina⁴, Siti

Aisyah⁵, Nurmala⁶, Eny Susanti⁷, Fatmawati Karim⁸

¹Bachelor of Midwifery Study Program, Faculty of Health Sciences, Nasional University
^{2,3,4,5,6,7,8}

Midwife Professional Education Study Program, Faculty of Health Sciences,
 Nasional University

** Corresponding Author: Febry Mutiariami Dahlan; Address;*

febrymutia@civitas.unas.ac.id,

Submission date: 08-06-2024; Date of received: 26-06-2024

Abstract

Anemia in pregnant women is a condition in which the body can't produce enough red blood cells to circulate oxygen to the body's tissues during pregnancy. Beetroot is one of the non-pharmacological treatments that is very useful for increasing hemoglobin levels. The purpose of community service is to help pregnant women with anemia by increasing hemoglobin levels in pregnant women by giving beetroot juice to pregnant women in the Karyamulya Village area, Batujaya District. This community service was carried out in Karyamulya Village, Batujaya District. The activities of community service go through 3 stages, namely the preparation, implementation, and evaluation stages.

The results of the counseling showed that there was a difference in HB levels before and after counseling and intervention in the administration of beetroot juice. Before being given beetroot juice, all respondents 20 (100%) had anemia, while after being given counseling and beetroot juice, most of the respondents did not experience anemia, namely 17 (85%) respondents, and 3 (15%) respondents experienced anemia

Counseling and giving beetroot juice for pregnant women with anemia is very effective because it follows health conditions, namely anemia in pregnancy which is experienced by many pregnant women in the region.

Keywords: Anemia of Pregnant Women, Beetroot Juice, Pregnancy

Introduction

Anemia in pregnant women is a condition in which the body cannot produce enough red blood cells to circulate oxygen to the body's tissues during pregnancy. Anemia in pregnancy can have a serious impact on the health of the mother and fetus. In anemia

conditions, the risk of abortion, premature delivery, and impaired growth and development of the fetus and uterus is higher. In addition, pregnant women who experience anemia are also susceptible to infections, antepartum plaque, and premature rupture of membranes (KPD). During the delivery process, anemia can cause disturbances in uterine contractions (HIS) and prolong the duration of 1 delivery, and can even cause the partus to be abandoned. In the postpartum period, anemia can lead to uterine subinvolution which can result in postpartum bleeding, increase the risk of puerperium infection, and reduce breast milk production (Aryanti, 2013). Mothers who give birth with anemia in their pregnancy have a 5.8 times greater chance of experiencing postpartum bleeding due to uterine atonia than mothers who give birth without anemia in their pregnancy (Simatupang, 2020).

The prevalence of anemia in pregnant women in Indonesia is 37.1%, the highest number in rural areas is 37.8% and the lowest in urban areas is 36.4%. This data provides a deeper understanding of the prevalence of anemia in pregnant women in the country ¹. Based on the results of data from the West Java Health Office in 2022, cases of anemia in pregnant women in West Java Province in 2021 exceeded 80,000 pregnant women/year and the figure decreased in the following year, namely in 2022 around 60,000 pregnant women/year ². The number of pregnant women who experience anemia in Karawang Regency in 2020 with hb <8gr/dl levels is 631 cases, hb 9-10gr/dl is 7389 cases.

Based on data from the Batujaya Health Center, the number of pregnant women in January-April was 195 pregnant women, and the number of pregnant women who experienced anemia was 92 people. Based on the results of a preliminary study conducted at TPMB Ipah Latipah, Batujaya District, Karawang Regency in 2024, it shows that the prevalence of anemia is 20 (33%) with a total of 60 pregnant women. There are several factors that play a role in increasing the prevalence of anemia in pregnant women. According to the World Health Organization, these factors include iron deficiency, nutritional deficiencies, parasitic infections, and underlying health conditions. Iron deficiency is the main cause of anemia in pregnant women. Pregnant women need higher iron intake to support fetal growth and increased blood needs. If there is not enough iron available, the body cannot produce enough hemoglobin, which leads to anemia. Lack of nutritional intake also plays a role in the prevalence of anemia in pregnant women. An unbalanced diet and lack of consumption of foods containing iron, folate, and vitamin

B12 can affect the nutritional status of pregnant women and cause anemia (WHO, 2020). There are two approaches that can be taken to prevent anemia in pregnancy, namely through pharmacological and non-pharmacological therapy. Pharmacological therapy involves giving iron tablets to pregnant women to increase hemoglobin levels. Although iron tablets are effective, there are side effects that may arise, such as digestive disorders such as discomfort in the stomach, nausea, constipation, and black stools ³.

In addition to pharmacological therapy, non-pharmacological therapy can also be used to accelerate the increase in hemoglobin levels in pregnant women. One non-pharmacological approach that can be done is to consume beets. Beets are known to contain high levels of folic acid, reaching 108 mg/100 grams, so it can help prevent anemia in pregnant women ³.

In recent years, natural drinks such as beetroot juice have become a concern in efforts to increase hemoglobin levels in pregnant women with anemia. Beetroot is known to be high in iron, folic acid, and vitamin C, all of which are essential nutrients for repairing and increasing hemoglobin production. Some studies have also shown that beetroot juice can have a positive effect in increasing hemoglobin levels in the population of pregnant women with anemia. To conduct this study, the knowledge obtained about the effect of beetroot juice on increasing hemoglobin levels will increase. The results of this study can be used as a basis for providing practical recommendations to pregnant women with anemia in the region, including providing advice on the appropriate dosage and frequency of beetroot juice consumption to achieve a significant increase in hemoglobin levels ⁴

Based on strong scientific evidence for health practitioners and related parties in implementing the use of beetroot juice as part of a non-pharmacological strategy in increasing hemoglobin levels in pregnant women with anemia. Although several previous studies have indicated the positive potential of beets in increasing hemoglobin levels in different populations, research on the effects of beets and their processing, especially beetroot juice in pregnant women with anemia, is still limited. Therefore, this proposal will bridge this knowledge gap by exploring the effects of beets specifically on pregnant women suffering from anemia. This research will be carried out at TPMB Ipah Latipah, a health facility (Independent Midwife Practice) that specializes in maternal and child health services. It is hoped that the results of this study can provide a better understanding of the potential of beetroot as an effective supplement in increasing hemoglobin levels in

pregnant women with anemia.

Method

This Community Service will be held on May 10, 2024, at 10.00 – 12.00 WIB at TPMB Ipah Latipah, S.Keb, Karyamulya Village, Batujaya District, Karawang Regency. The activity began with Permission, Data Collection, and Data Analysis, and continued with Focus Group Discussion (FGD) with several stakeholders to determine the priority of problems to our intervened. After FGD, the priority problem was obtained, namely Anemia. The handling problem in Karyamulya Village by providing Anemia, we gave counseling to pregnant women which include anemia, the dangers of anemia, and how to prevent anemia in pregnant women as well as teaching/demonstrating the making of beetroot juice as an alternative in overcoming and preventing anemia as much as 500 ml and directed to be consumed 2x1 for 7 days.

Results

Community Service was carried out on May 10, 2024, with the participation of 20 pregnant women who experienced anemia. After the activity was carried out by giving a posttest to pregnant women, there is difference of Hb levels before and after consumption of beetroot juice. Before gave counseling and beetroot juice, incident of anemia in pregnant woman who be respondent in community services is all of respondent 20 (100%), while after being given beetroot juice, most of them did not experience anemia 17 (85%) pregnant women, and there were 3 (15%) pregnant women still anemia. This means that health counseling and the provision of beetroot juice have a good impact on participants, it can increase Hb levels in pregnant women.

Discussion

Preparation Stage

The activity began with Permission, Data Collection, and Data Analysis, and continued with Focus Group Discussion (FGD) with several stakeholders to determine the priority of problems to our intervened. After FGD, the priority problem was obtained, namely Anemia. Before starting the activity, the community service implementation team made an initial visit to the location of the activity and make an agreement with the midwife and cadres to carry out service on May 10, 2024 at TPMB Ipah Latipah, S.Keb Karyamulya Village, Batujaya District, Karawang Regency, the target of this counseling is pregnant women.

Implementation Stage

This Community Services began with a pretest of pregnant women for make sure, how they knew about anemia and prevent anemia with a checklist form. Then we gave counseling about anemia, the causes of anemia, the impact of anemia on pregnancy, and how to prevent anemia with the consumption of beetroot juice. After the presentation, we gave time for discussion, and question and answer as seen in Figure 1. In the presentation of the material, the community service team used PPT and leaflet media to make it easier for participants to understand the explanation from the presenter. The leaflet contains material on the definition of anemia, symptoms of anemia, causes of anemia, prevention of anemia, and how to make beetroot juice to increase Hb levels. After that, we give a demonstration how to make beetroot juice and how to consumption day to day. We recommend consumption of 500 ml a day. Participants in this community service were 20 pregnant women with anemia.



Figure 1. Discussion



Figure 2. Q&A Session



Figure 3. Beetroot Juice

Evaluation Stage

An evaluation was carried out to assess how much impact the results of the implementation of community service were. Evaluation is carried out by discussion or question and answer. Based on the results of the implementation of community service

counseling, 20 participants attended until the end of the activity. This activity was carried out together with the team. The participants were very active during the activity with a question and answer session. This community service activity has been carried out well and runs smoothly according to the activity plan that has been prepared.

After 7 days of the pregnant women consumption 1x1 day of beetroot juice, we checked the hemoglobin level, The result was different Hb levels before and after consumption of beetroot juice, and it was obtained from 20 respondents, most of whom were 17 (85%) non-anemic, and 3 (15%) respondents were anemic. This means that health counseling and the provision of beetroot juice have a good impact on participants, namely it can increase Hb levels in pregnant women.

The results of this community service prove that the provision of beetroot juice and the provision of health counseling about the benefits of beetroot juice for the treatment of anemia in pregnant women at TPMB Ipah Latipah work area had more impact. Where this counseling is educational to increase knowledge. Especially in promotive and preventive efforts and achieving an optimal degree of public health.

Conclusion

Based on the results of community service, it can be concluded that counseling pregnant women and the consumption of beetroot juice to pregnant women with anemia is very effective, proved that pregnant women have an impact on their hemoglobin levels. It is according to health conditions in this area, namely anemia in pregnancy which is experienced by many pregnant women.

References

1. Liananiar, Harahap FSD, Liesmayani EE. Analisis Pengaruh Konsumsi Buah Bit Terhadap Peningkatan Kadar Hemoglobin Pada Ibu Hamil Trimester III. *Heal Care J Kesehat*. 2020;9(1):1-8. doi:10.36763/healthcare.v9i1.49
2. Cahya WE, Fitriani AL, Mandaty FA, Rizqitha R. Efektivitas Buah Kurma Dan Buah Bit Terhadap Kadar Hemoglobin Pada Ibu Hamil Trimester Ii Di Wilayah Puskesmas Karangawen Ii Kabupaten Demak. *J Surya Muda*. 2021;3(2):65-75. doi:10.38102/jsm.v3i2.86
3. Rohmah hajar nur fathur. Faktor – Faktor yang Berhubungan dengan Kejadian Pre Eklampsia Berat pada Ibu Hamil Trimester III di RSUD Kota Bekasi Tahun 2018. *J Ilm Kesehat Inst Med drg Suherman*. 2019;1(1):65-76.
4. Aisyah S. Hubungan Status Gizi Dengan Kejadian Anemia Pada Kehamilan Trimester Iii Di Polindes Jabung. *J Kebidanan*. 2020;8(2):10. doi:10.30736/midpro.v8i2.11
5. WHO. Kejadian Anemia di Dunia. *kebidanan*. 2022;3.

6. Kementerian Kesehatan RI. *Profil Kesehatan Indonesia 2020*. (Boga Hardhana, S.Si M, Farida Sibuea, SKM MsP, Winne Widiyanti, SKM M, eds.). Kementerian Kesehatan Republik Indonesia; 2021.
7. Profil Dinas Kesehatan Jawa Barat. Angka Kejadian Anemia. *kebidanan*. Published online 2022.
8. Gustina I, Yuria M, Dita PS. Manfaat Pemberian Jus Buah Bit Pada Ibu Hamil Dengan Anemia Terhadap Peningkatan Kadar Hemoglobin Di Wilayah Kerja Puskesmas Kec. Jatinegara Dan Puskesmas Kec. Kramat Jati Tahun 2019. *J Ilm Bidan*. 2020;V(1):36-44.
9. Putri PH, Putri FK, Rahmawati S. Efektivitas Bayam dan Buah Bit Terhadap Kadar Hemoglobin Ibu Hamil: Systematic Literature Review Study. *Med Technol Public Heal J*. 2021;5(1):57-65.
10. Indrayani T, Choirunissa R, Tambunan MH. Pengaruh Pemberian Jus Umbi Bit Terhadap Kenaikan Kadar Haemoglobin Pada Ibu Hamil Dengan Anemia Di BPM Miftah Wahyudi Kec. Jatijajar Depok Tahun 2019. *J Qual Women' s Heal*. 2020;3(2):146-152. doi:10.30994/jqwh.v3i2.64
11. Prawirohardjo S. *Ilmu Kebidanan*. Keempat. (Saifuddin AB, ed.). PT. Bina Pustaka Sarwono Prawirohardjo; 2020.
12. Siregar AS, Sulistyaningsih SH. HUBUNGAN STATUS GIZI DENGAN KEJADIAN ANEMIA PADA IBU HAMIL DI DESA MANISMATA KALIMANTAN BARAT. *J Ilm Shine*. 2023;9(02):35-44.
13. Kuantitas S, Care A, Sosial DAN, Yanti N, Dewi O, Marlina H. DENGAN RISIKO ANEMIA PADA KEHAMILAN The standard of antenatal care quantity and social culture with anemia risk during pregnancy E-mail : mitra@htp.ac.id PENDAHULUAN Anemia pada kehamilan merupakan kondisi ibu dengan kadar hemoglobin (Hb) kurang dari 11. 2021;12(1):51-63. doi:10.22435/kespro.v12i1.4386.51-63
14. Natasha TZ, Niara SI. Determinan Kematian Ibu Serta Upaya dalam Penurunannya; Studi Literatur. *J Ilm Kesehat Masy*. 2022;14(3):110-117.
15. Salmariantity. Faktor-Faktor Yang Berhubungan Dengan Anemia Pada Ibu Hamil Di Wilayah Kerja Puskesmas Gajah Mada Tembilahan Kabupaten Indragiri Hilir Tahun 2012. *Who 2020*. Published online 2022:114.
16. Yuningsih S. Kepatuhan Ibu Hamil Dalam Mengonsumsi Tablet Fe Di TPMB Sri Yuningsih , AM . Keb Kabupaten Bekasi Tahun 2022. Published online 2022:1-9.
17. Deprika CE. Faktor-Faktor Yang Berhubungandengan Kejadian Anemia Pada Ibu Hamil Di Puskesmas Mantrijeron Yogyakarta. Published online 2019:274-282.
18. Santy E. HEMOGLOBIN DENGAN METODE EKSPERIMENT (Experiment Method of Dragon Fruit Intervention in Increasing Hemoglobin Level). 2019;2(1):8-13.