

Hemoglobin Examination and Giving Guava Juice to Pregnant Women in Cibungbulang District, Bogor Regency

Pemeriksaan Hemoglobin dan Pemberian Jus Jambu Biji pada Ibu Hamil di Kecamatan Cibungbulang Kabupaten Bogor

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Abstract:

According to data from the WHO (World Health Organization), In 2017, an estimated 295,000 maternal deaths of women died during and after pregnancy and childbirth. The Ministry of Health of the Republic of Indonesia (Kemenkes RI) recorded that the number of maternal deaths in Indonesia was 4,627 people in 2020. This number increased by 8.92% from the previous year, 4,197 people. By province, 745 mothers who died were in West Java last year. The proportion reaches 16.1% of the total maternal mortality in the country. Anemia is one of the indirect causes of maternal death due to bleeding. In pregnant women, anemia increases the frequency of complications in pregnancy and childbirth. In general, one of the causes of iron deficiency anemia is insufficient iron intake and inadequate absorption (Widyastuti, 2005). Iron absorption is greatly influenced by the availability of vitamin C in the mother's body. Guava juice is a fruit easily and cheaply obtained by the public. Red guava contains carbohydrates of 12.2 g / 100 gr and fiber of 5.6 g / 100 guava fruit. So, it is hoped that pregnant women will understand their condition during pregnancy after this service. This community service was conducted through demonstrations and practices on 20 pregnant women in Cibungbulang District, Bogor Regency. This activity went well, and pregnant women felt the benefits of this service activity. Pregnant women are expected to be aware of the dangers of anemia and the benefits of detection by checking hemoglobin and consuming guava juice to increase hemoglobin levels.

Keywords: anemia; guava juice; hemoglobin; pregnant women.

Abstrak:

Menurut data dari WHO (World Health Organization), pada tahun 2017 kematian ibu diperkirakan 295.000 wanita meninggal selama dan setelah kehamilan dan persalinan. Kementerian Kesehatan Republik Indonesia (Kemenkes RI) mencatat, jumlah kematian ibu di Indonesia sebanyak 4.627 jiwa pada 2020. Jumlah tersebut meningkat 8,92% dari tahun sebelumnya yang sebanyak 4.197 jiwa. Berdasarkan provinsi, sebanyak 745 ibu yang meninggal dunia berada di Jawa Barat pada tahun lalu. Proporsinya mencapai 16,1% dari total kematian ibu di tanah air. Anemia menjadi salah satu penyebab tidak langsung terjadinya kematian ibu akibat perdarahan. Pada wanita hamil anemia meningkatkan frekuensi komplikasi pada kehamilan dan persalinan. Secara umum, salah satu penyebab anemia defisiensi zat besi yaitu asupan zat besi tidak cukup dan penyerapan tidak adekuat. Penyerapan zat besi sangat dipengaruhi oleh ketersediaan vitamin C dalam tubuh ibu. Jus Jambu biji merupakan buah yang mudah dan murah didapatkan masyarakat. Buah jambu biji merah mengandung karbohidrat sebesar 12,2 gr/100 gr dan serat sebesar 5,6 gr/100 buah jambu biji. Sehingga diharapkan setelah dilaksanakan pengabdian ini, ibu hamil bisa paham akan keadaannya saat hamil. Pengabdian masyarakat ini dilakukan melalui demonstrasi dan praktik yang dilaksanakan Pada 20 Ibu Hamil Di Kecamatan Cibungbulang Kabupaten Bogor. Kegiatan ini berjalan dengan baik dan ibu hamil merasakan manfaat dari kegiatan pengabdian ini. Diharapkan ibu hamil sadar akan bahaya dari anemia, manfaat deteksi dengan melakukan pemeriksaan hemoglobin dan konsumsi jus jambu biji untuk meningkatkan kadar hemoglobinya.

Kata Kunci: anemia; ibu hamil; jus jambu biji; hemoglobin.

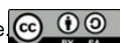
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INTRODUCTION

According to data from the WHO (World Health Organization), about 810 women die from complications of pregnancy or childbirth worldwide every day. Between 2000 and 2017, the maternal mortality ratio fell by about 38% worldwide. In 2017 an estimated 295,000 maternal deaths of women died during and after pregnancy and childbirth. The maternal mortality ratio in developing countries 2017 was 462 per 100,000 live births compared to 11 per 100,000 live births in developed countries (WHO, 2017). While the Infant Mortality Rate (AKB) is estimated to reach 11 per 1,000 live births (WHO, 2018)

The Ministry of Health of the Republic of Indonesia recorded that the number of maternal deaths in Indonesia was 4,627 people in 2020. This number increased by 8.92% from the previous year, 4,197 people (Ministry of Health of the Republic of Indonesia, 2020). By province, 745 mothers who died were in West Java last year. The proportion reaches 16.1% of the total maternal mortality in the country.

Bogor Regency is included in the administrative region of West Java Province. The area of Bogor Regency is around $\pm 3,416,155.00$ km consisting of 40 sub-districts, 417 villages and 18 kelurahan, 3,822 RWs, 15,561 RTs. Geographically located between $6^{\circ}18'0''$ - $6^{\circ}47'10''$ S and $106^{\circ}.23'45''$ - $107^{\circ}13'30''$ E, the north is bordered by DKI Jakarta, Tangerang Regency / City and Bekasi Regency / City; the south is bordered by Sukabumi Regency, Cianjur, Purwakarta and Karawang Regencies border the east, while the west is bordered by Lebak, Pandeglang and Serang Regencies (Health Office of Bogor, 2020).

Based on data from the Regional Publication of the Results of the 2010-BPS Census issued by the Central Statistics Agency (BPS), the population in Bogor Regency in 2019 was 5,965,410 people. The 2007 Indonesian Demographic and Health Survey stated that MMR for the 5 years before the survey (2003-2007) amounted to 228 per 100,000 live births. The Maternal Mortality Rate in Bogor Regency in 2013 still uses the West Java Maternal Mortality Rate of 228 per 100,000 live births (IDHS 2007), in 2014 and 2015 using the West Java Maternal Mortality Rate based on the 2012 IDHS, which is 359 per 100,000 live births, in 2018 using the Maternal Mortality Rate based on the 2015 Inter-Census Population Survey (SUPAS) of 305 per 100,000 live births (Health Office of Bogor, 2020).

The cause of maternal death, based on the Bogor Regency Health Center report in 2019, was found to be the highest cause of bleeding at 40.28%. MMR in the district is still high, so it takes effort and hard work to achieve it. One of the most effective ways to reduce maternal mortality is to get birth care from trained health workers, and some important determinants that affect MMR directly include nutritional status, anemia in pregnancy, and conditions three late and four too. External factors that affect maternal mortality are maternal education level, health, physical and cultural environment, family economy, and household work patterns (Health Office of Bogor, 2020).

Bleeding occupies the highest percentage of maternal deaths one of the causes is anemia (Almatsier, 2009). Anemia during pregnancy has a huge impact. Pregnant women who experience anemia can experience miscarriage, premature birth, low birth weight, and bleeding before and during labor can even result in death in the mother and fetus (Tarwoto and Wasnidar, 2010)

According to the Regulation of the Minister of Health of the Republic of Indonesia number 88 of 2014 that, to protect pregnant women from malnutrition and prevent the occurrence of iron nutrition anemia, pregnant women need to consume blood-added tablets. Standard blood tablets for women of childbearing age and pregnant women are: For women of childbearing age, it is given 1 (once) time a week and 1 (one) time a day during menstruation, and for pregnant women, it is given every day during pregnancy or at least 90 (ninety) tablets. The distribution is one of the achievement targets in Antenatal Care (ANC); four ANC visits are sufficient, with details once per trimester and twice in the last trimester. The government program carried out can be seen in the coverage of Fe tablets to pregnant women in Indonesia in 2012; nationally, the coverage of pregnant women getting 90 Fe tablets is 86%. The data almost reached the 2012 program target of 90% (Ministry of Health RI, 2014).

In pregnant women, anemia increases the frequency of complications in pregnancy and childbirth. In general, one of the causes of iron deficiency anemia is insufficient iron intake and inadequate absorption (Widyastuti, 2005). Iron absorption is greatly influenced by the availability of vitamin C in the mother's body. Vitamin C can help reduce ferric iron (Fe^{3+}) to ferrous (Fe^{2+}) in the small intestine so that it is easily absorbed; the reduction process will be greater if the pH in the stomach is more acidic. Vitamin C can add acidity to increase iron absorption by up to 30% (Sari, 2013). One fruit that is very rich in vitamin C is guava.

Red guava contains carbohydrates of 12.2 g per 100 gr and fiber of 5.6 g per 100 guava fruit. According to the IG International Table by Atkinson et al. (2008), the lowest IG value of 19% was found in guava fruit. Red guava fruit contains many seeds, so red guava fruit is processed into juice to make it easy to consume.

IMPLEMENTATION METHOD

This community service activity was conducted on Saturday, June 18, 2022, on 25 pregnant women in Cibatok Village, Cibungbulang District, Bogor Regency. Activities using consumables, hemoglobin examination, hemoglobin check kit, and tools for making guava juice. Through the stages of the planning stage, starting with permits to *Puskesmas* and villages; the implementation stage, dissemination of information a week before the activity; a collection of service participants on the day of implementation, making and giving guava juice; and the evaluation stage of hemoglobin level examination.

RESULT AND DISCUSSION

This community service activity was held on Saturday, June 18, 2022, from 09.00 – 12.00 WIB for 25 pregnant women in Citato Village, Cibungbulang District, Bogor Regency. Service activities are carried out at the Yuni Midwife Independent Practice. Cibungbulang District is a western development area with 12 other sub-districts with the Main Growth Centers of Jasinga, Parung Panjang, and Lweuwiliang Districts. Secondary Growth Centers are Ciampea and Tenjo Districts; the rest are Tertiary Growth Centers, including Cibungbulang District.

Cibatok Satu Village is one of the villages in Cibungbulang District, Bogor Regency, with an area of 174.4 ha. Judging from the topography and contour of the land, Cibatok Satu Village, Cibungbulang District, is generally in the form of a plain at an average height of between 270 m above sea level with an average temperature ranging from 200 to 320C. Cibatok Satu Village consists of four Hamlets, nine Community Pillars (RW) and 28 Neighborhood Pillars (RT).

The boundaries of Cibatok Satu Village are as follows (Village Monograph 2013):

1. Bogor Street borders the north,
2. The Ciaruteun River borders the east,
3. Cibatok Dua Village borders the south, and
4. The Cibungbulang River borders the west.

This community service was performed on 25 pregnant women by gathering them at the Yuni Independent Midwife Practice. First, pregnant women are told the benefits and effects of anemia if experienced during pregnancy. Furthermore, the Hemoglobin Quick Test tool checks pregnant women for hemoglobin levels.

Obtained from 25 pregnant women, 16 people had mild anemia and 9 people with normal hemoglobin levels. Mothers are explained how to handle low hemoglobin levels with the consumption of Fe tablets given by midwives and help the absorption process of Fe by consuming Vit C, can be through fruit, one of which is Guava Juice, then pregnant women are given a glass (250cc) of guava juice which was previously demonstrated how to make the juice.

In general, this activity ran smoothly, and no significant obstacles were found. This community service was carried out by inviting 25 pregnant women to the place of activity. This activity began with providing information related to anemia in pregnant women, and mothers enthusiastically listened to the information.

Then the activity continued with the implementation of Hemoglobin Level examination. At the time of the initial examination, the mother felt anxious because she was afraid of needles, but after explaining the examination procedure and modeling it first to the members, the mother was interested and willing to do the examination and found that 55% had mild anemia.



Figure 1. Hemoglobin Level Measurement



Figure 2. Providing Guava Juice

Furthermore, the activity continued with a demonstration of making guava juice; one of the mothers was allowed to try making juice, and all pregnant women were given guava juice for direct consumption. After this service activity, the pregnant woman gave positive feedback after an evaluation to midwife Yuni that at the time of the pregnancy visit examination, the mother said she was a little fitter than before after consuming Fe tablets every day and accompanied by consumption of foods containing vitamin C.

CONCLUSION AND SUGGESTION

Pregnant women who have explained the purpose of this service activity said they were happy because they were no longer worried about the impact of anemia. They said they would check hemoglobin levels regularly, especially later during the third trimester of pregnancy. Furthermore, after being given information on how to make guava juice properly and how to consume Fe tablets correctly, mothers want to consume Fe tablets every day and accompanied by consuming foods rich in Vitamin C. Community service activities carried out include obtaining activity permits, demonstrations, hemoglobin examinations, and giving guava juice and giving souvenirs. The implementation of this activity is carried out on-site but still complies with health protocols.

It is hoped that this activity can provide input to health workers or health offices as a reference in preventing and treating anemia in pregnancy. And expect pregnant women to be more aware of the impact of anemia and make preventive efforts when knowing the condition of pregnancy to be able to maintain and not experience anemia, and for pregnant women who have anemia can do therapy in the form of consuming Fe tablets and foods containing vitamin C.

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