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# Comparison Of The Effect Of Giving Fe Tablet With Ambon Banana And That Without Ambon Banana On Hemoglobin Levels In Pregnant Women

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## ABSTRACT

Consuming Ambon bananas is an alternative to speeding up iron absorption because they contain vitamin C. Data obtained from the Bulukumba district health office, namely there were 7597 pregnant women and those suffering from anemia from January to October 2021, namely 1020 people. The total number of pregnant women with anemia is 13.42%. Research Objectives To find out the comparison of the effect of giving Fe tablets accompanied by Ambon Bananas and those without Ambon Bananas on Hemoglobin Levels in Pregnant Women at the Bontobangun Health Center, Rilauale District, Bulukumba Regency. The research design is pre-experimental with a pre-test post-test design approach. The sample size is 40 people. The sampling technique is Consecutive sampling. The research was carried out from December 2022 to January 2023 at the Bontobangun Health Center, Rilau Ale District. Based on the results of the study, it was found that the mean pre-test HB value was higher in the control group, which was 9.26 gr/dl, while the mean post-test HB value was higher in the intervention group, which was 10.96 gr/dl, meaning that there was an increase in hemoglobin levels in both group, namely pregnant women for 14 days in the group that consumed Fe tablets with Ambon bananas and in the group that only used Fe tablets. This shows that there is a mean difference between the intervention group and the control group. The results of the unpaired t test obtained a value of $p = 0.003$, so it was concluded that there was a significant difference in the mean between the two groups. The conclusion in this study was that there was a significant difference in Hb levels between before and after treatment in both the intervention group and the control group. The research results should be used as a reference in providing additional interventions related to the willingness of pregnant women to get used to consuming Ambon bananas.

**KEYWORDS : Ambon Banana; Hb levels; anemia**

## INTRODUCTION

Pregnant women are a group at high risk of experiencing anemia, hypertension or excess protein which results in pre-eclampsia/eclampsia which is initiated by several factors such as physical and environmental factors. Pregnant women who have a poor lifestyle and nutritional status have the potential to experience several symptoms or diseases of pregnancy such as anemia which can occur in trimesters I, II and III.

Blood volume during pregnancy will increase by approximately 40-50% to meet the demand for placental circulation. The plasma volume increases more than the red blood cell volume (which increases by only about 30%). This situation is called physiologic anemia of pregnancy (Yeyeh rukiah, 2009:53). Anemia often occurs due to iron deficiency because in pregnant women there is an increase in blood volume without expansion of plasma volume (Fatimah, 2011: 32).

According to Mochtar (2005) in Yeyeh rukiah and et al (2013, p.: 104-105). Deficiency of these elements can be bad for health conditions, especially for pregnant women who need more nutrients for fetal growth. In pregnant women, efforts are made not to experience Fe deficiency which can cause anemia, because this anemia can adversely affect pregnancy, childbirth or the puerperium. So that pregnant women are required to consume Fe tablets every day during pregnancy totaling 90 tablets. This is done to prevent anemia in pregnant women (Manuaba, 2005). In addition, to be sure, a hemoglobin blood test is carried out to determine the Hb level in the mother's body which is carried out 2 times during pregnancy. Pregnant women with low Hb levels will result in several complications that will occur. Pregnant women are at risk for anemia, hypertension or excess protein.

There are two efforts to prevent and treat anemia, namely pharmacology by consuming drugs which include iron supplements, vitamin B12, folic acid and blood transfusions and non-pharmacological therapies such as giving red guava juice, Ambon bananas and others. other. Ambon banana is a non-pharmacological therapy which is consumed as a staple food in the tropics. Consuming bananas can be a solution for pregnant women who experience anemia. Consuming 2 bananas every day is very beneficial for pregnant women, the point is to help overcome anemia. (Sunarjono, 2015)

## MATERIALS AND METHODS

This research is a Quasy Experimental study to determine the effect of giving Fe tablets accompanied by Ambon bananas on increasing hemoglobin levels in pregnant women. In this study the design used was case-control, case-control. The population in this study were all pregnant women who were in the working area of the Bonto Bangung Health Center.

The sample in this study were pregnant women who were in the working area of the Bonto Bangung Health Center, consisting of 40 people consisting of 20 people in the control group and 20 people in the case group. In this study, it has passed the processing

of ethical permits and has obtained an ethical certificate with No: 000388/KEP Stikes Panrita Husada Bulukumba/2023

## RESULTS

Based on table 1 with a total of 40 respondents, it shows that most of the respondents are at risk of 20-35 years of age, 21 people (52.5%), parity, most of them are multigravida, 23 people (57.5%) and education level most of the secondary education as many as 22 people (55%).

**Table 1 : Characteristics Of Respondents**

| Karakteristik Responden | Frequency (n) | Percentage (%) |
|---|---|---|
| Age | | |
| Low Risk (20-35 Years) | 21 | 52.5 |
| | 19 | 47.5 |
| High Risk (<20 and >35 years) | | |
| Parity | | |
| Primigravida | 17 | 42.5 |
| Multigravida | 23 | 57.5 |
| Education | | |
| Low (SD) | 11 | 27.5 |
| Intermediate (junior higg school) | 22 | 55 |
| Height (D3-S1) | 7 | 17.5 |
| **Amount** | **40** | **100** |

Based on table 2 , it can be seen that the mean pre-test HB value was higher in the control group, which was 9.26, while the mean post-test HB value was higher in the intervention group, which was 10.96.

**Table 2 : Distribution Of Respondents Hb Frequency Before and After Administering Ambon Bananas Plus Fe Tablet And fe Tablets**

| Haemoglobin | Hb *Pre Tes* | Hb *Post Tes* |
|---|---|---|
| | Mean | Mean |
| **Ambon Banana + Fe Tablet** | 9,07 | 10,96 |
| **Fe Tablet** | 9,26 | 10,28 |

Based on table 3 above, it can be seen that there are significant differences in both the intervention group and the control group with a p value of 0.003 which is smaller than the α value of 0.005

**Table 3 : Results Of Analysis Of Administration Of Ambon Bananas On Increased Hemoglobin Levels**

| | | Df | Sig (2-tailed) | Mean difference |
|---|---|---|---|---|
| Post inter Fe dan Pisang ambon | Equal VariacesAssumed | 38 | *0,003* | *0,6750* |
| | Equal Variaces Not Assumed | 37,742 | *0,003* | *0,6750* |

## DISCUSSION

Based on the results of the study, it was found that the mean pre-test HB value was higher in the control group, which was 9.26 gr/dl, while the mean post-test HB value was higher in the intervention group, which was 10.96 gr/dl, meaning that there was an increase in hemoglobin levels in both group, namely pregnant women for 14 days in the group that consumed Fe tablets with Ambon bananas and in the group that only used Fe tablets. This shows that there is a mean difference between the intervention group and the control group. The results of the unpaired t test obtained a value of $p = 0.003$, so it was concluded that there was a significant difference in the mean between the two groups.

Based on the explanation in Hardiani's research article (2020) regarding nutritional anemia put forward by Fatimah that iron deficiency anemia can occur because the iron content in the food consumed does not meet the needs. It is usually done in an effort to treat cases of anemia in pregnant women by consuming iron supplements to meet the needs of hemoglobin synthesis for both the mother and the fetus. However, according to More (2014) fulfilling the need for iron with oral iron causes many side effects such as nausea, dyspepsia, and constipation which cause discomfort in pregnant women.

However, dietary adjustments are no less important because iron is more easily absorbed from direct food than oral iron (Andriani, 2017). According to Suwarto (2015) one alternative is to consume bananas every day to meet iron intake for anemic patients. Moreover, bananas contain folic acid which is easily absorbed by the fetus through the uterus. According to Olii (2019) Bananas contain tryptophan, an amino acid that can be changed to help the body's hemoglobin function. The high iron content can stimulate the production of hemoglobin in the blood for people with anemia.

Another study showing changes in Hb levels in pregnant women after consumption of Ambon bananas was carried out by Enny Widayati and Siti Aisah (2021) with the research title, Administration of Ambon Bananas to Increase Hemoglobin Levels in Third Trimester Pregnant Women with Anemia. The results of the case study were that the sample had an increase in Hb levels, Patient I was originally 9.7 gr/dl to 11.3 gr/dl and patient II was originally 8.8 gr/dl to 9.9 gr/dl. Giving Ambon bananas 2 times a day in the morning and evening together with consuming Fe tablets can increase Hb levels in third trimester pregnant women with anemia.

In this study there was a multigravida parity of 57.5%. According to Oktaviani, et al (2016) parity is related to the occurrence of anemia, because the more often women give

birth, the greater the risk of blood loss and has an impact on decreasing Hemoglobin levels. A woman who has given birth more than 2 times, and another pregnancy occurs, her health condition will begin to decline, often experiencing anemia. This can increase the high risk of morbidity and mortality in the baby's mother.

In this study, based on the age of pregnant women, there were 47.5% of respondents with characteristics of age <20 and >35 years and 55% of secondary education level characteristics. According to Manuaba in Ariyani (2016), pregnant women aged over 35 years will also be prone to anemia. This causes the body's resistance to begin to decrease and it is susceptible to various infections during pregnancy. Meanwhile, the level of education of pregnant women who is still middle affects the reception of information so that knowledge about anemia and its related factors, as well as knowledge about the importance of iron is limited. Age <20 and >35 years according to Oktaviani et al (2016) in Oii (2019) mostly have low hemoglobin levels.

Researchers assumed that there was a significant difference in Hb levels in pregnant women before and after treatment in both the intervention group and the control group. This happens because pregnant women regularly consume Ambon bananas and Fe tablets 14 days for 2-3 times a day. Likewise in the control group, pregnant women who only consumed Fe tablets also experienced an increase, but in the intervention group the increase in hemoglobin levels was more than the control group. Ambon bananas are able to provide excellent benefits for pregnant women and those with anemia. So according to the researchers, anemia can be prevented from the start for pregnant women, that is, from the pregnancy program until pregnant, they must consume Ambon bananas.

## CONCLUSIONS

Based on the results of the study it can be concluded that there were differences in HB levels between the group consuming Fe tablets combined with Ambon bananas and the control group consuming only Fe tablets.

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