SWEET POTATOES CONSUMPTION AGAINST HEMOGLOBIN LEVELS OF PREGNANT WOMEN IN THE THIRD TRIMESTER

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ABSTRACT

Background: Anemia is one of the most indirect causes of bleeding in maternity women. The effects of anemia at the time of delivery include his dystocia, the strength of pushing, the first stage, which lasts a long time, the third stage, which is followed by the retained placenta and postpartum hemorrhage due to uterine atony, and the fourth stage, which occurs secondary postpartum hemorrhage and uterine atony. One way to increase hemoglobin levels in pregnant women is to increase nutritious food. Here, sweet potatoes have high nutritional value, rich in vitamins and minerals.

Objective: To know the effect of sweet potato consumption on hemoglobin levels of pregnant women in the third trimester (TM III) at Puskesmas Branti, South Lampung Regency, in 2020.

Research methods: This quantitative used a quasi-experimental research design and two group pretest-posttest research methods. The population in this study was all pregnant women in TM III who performed antenatal care (ANC) at Puskesmas Branti, South Lampung Regency, in March, as many as 138 respondents, with a total sample of 20 pregnant women, of which 10 were the intervention group and 10 were the control group. The research sample was taken using the purposive sampling technique.

Research results: Based on data analysis, at Puskesmas Branti, South Lampung Regency, in 2020, the mean Hb level of respondents before the intervention consuming sweet potatoes was 11.230 (10.6-11.7), and after the intervention consuming sweet potatoes was 12.530 (11.4-13.2). Meanwhile, the mean Hb level of intervention respondents before consuming Fe tablets was 11.060 (10.1-11.8), and after consuming Fe tablets, it was 11.870 (11.2-12.5).

Conclusion: Based on bivariate analysis using the paired sample t-test, the p-value was <0.05, which was 0.000, meaning that there was an effect of sweet potato consumption on the hemoglobin level of pregnant women in the third trimester at Puskesmas Branti, South Lampung Regency in 2020.

Suggestion: From the results of this study, it is hoped to take advantage of the presence of sweet potatoes in the home environment.

Keywords: Pregnant Women, Hemoglobin Level, Sweet Potato

ABSTRAK KONSUMSI UBI JALAR TERHADAP KADAR HEMOGLOBIN IBU HAMIL TRIMESTER III

Latar Belakang: *Anemia* merupakan salah satu penyebab tidak langsung terjadinya perdarahan terbanyak pada ibu bersalin. Pengaruh *anemia* pada saat persalinan yaitu gangguan his, kekuatan mengejan, kala pertama dapat berlangsung lama, kala uri dapat diikuti retensio plasenta dan perdarahan post-partum karena atonia uteri, kala empat dapat terjadi perdarahan post-partum sekunder dan atonia uteri. Salah satu cara untuk meningkatkan kadar hemoglobin pada ibu hamil yaitu dengan cara meningkatkan makanan bergizi. Ubi jalar memiliki nilai gizi yang tinggi, kaya vitamin, dan mineral.

Tujuan penelitian: Diketahui Pengaruh konsumsi ubi jalar terhadap kadar hemoglobin ibu hamil trimester III di Puskesmas Branti Kabupaten Lampung Selatan Tahun 2020.

Metode Penelitian: Jenis penelitian kuantitatif dengan rancangan penelitian quasi eksperimen dan metode penelitian *Two group pretest posttest*. Populasi dalam penelitian ini adalah seluruh ibu hamil TM III yang melakukan Antenatal Care (ANC) di Puskesmas Branti Kabupaten Lampung Selatan pada bulan Maret adalah sebanyak 138 responden dengan jumlah sampel sebanyak 20 ibu hamil, dimana 10 sebagai kelompok intervensi dan 10 sebagai kelompok kontrol. Pengambilan sample penelitian menggunakan teknik *purposive sampling*.

Hasil Penelitian: Berdasarkan analisis data, diketahui bahwa Di Puskesmas Branti Kabupaten Lampung Selatan Tahun 2020, rata-rata kadar Hb responden intervensi sebelum mengkonsumsi ubi jalar 11,230 (10,6 –

11,7) dan sesudah mengkonsumsi ubi jalar 12,530 (11,4 – 13,2), sedangkan rata-rata kadar Hb responden intervensi sebelum mengkonsumsi tablet Fe 11,060 (10,1 – 11,8) dan sesudah mengkonsumsi tablet Fe 11,870 (11,2 – 12,5).

Kesimpulan: Berdasarkan analisis bivariat dengan menggunakan uji Paired Sample T-Test, diketahui nilai p-value < 0,05 yaitu 0,000 yang artinya ada pengaruh konsumsi ubi jalar terhadap kadar hemoglobin ibu hamil trimester III di Puskesmas Branti Kabupaten Lampung Selatan Tahun 2020.

Saran: Hasil penelitian ini diharapkan agar dapat memanfaatkan adanya ubi jelar disekitar lingkungan rumah.

Kata Kunci: Ibu Hamil, Kadar Haemoglobin, Ubi Jalar

INTRODUCTION

Anemia is one of the most indirect causes of bleeding in maternity women. The effects of anemia at the time of delivery include his dystocia, the strength of pushing, the first stage, which lasts a long time, the third stage, which is followed by the retained placenta and postpartum hemorrhage due to uterine atony, and the fourth stage which occurs secondary postpartum hemorrhage and uterine atony (Prawirahardjo, 2009).

On the other hand, the SDGs (Sustainable Development Goals) target to reduce maternal mortality, under-five mortality rates, HIV/AIDS rates, and drinking water coverage. The SDGs target in 2030 is to reduce the maternal mortality rate (MMR) to 70 per 100,000 live births and reduce the infant mortality rate (IMR) by 12 per 1,000 live births and the under-five mortality rate (AKABA) by 25 per 1,000 live births (Profile of the Indonesian Ministry of Health, 2018).

Based on 2012 Indonesian Demographic and Health Survey (IDHS), the MMR (associated with pregnancy, childbirth, and the puerperium) was 359 per 100,000 live births. This figure is still quite high compared to neighboring countries in the ASEAN region. It is where the maternal death in Indonesia is caused by bleeding as much as 30.3%, hypertension as much as 27.1%, infection as much as 7.3%, prolonged labor as much as 1.8%, abortion as much as 1.6%, and others as much as 40.8% (Indonesian Health Profile, 2018). The MMR again showed a decline to 305 per 100,000 live births based on the results of the Inter-census Population Survey in 2016, but it is still far from the SDG's target of 70 per 100,000 live births (Riskesdas, 2018).

In Lampung, MMR cases continue to increase. Based on information from the Lampung Provincial Health Office in 2016, there were 122 MMRs in Lampung. The number increased to 144 cases in 2017 and reached 158 cases in 2018. Maternal deaths in Lampung province were caused by 47 cases of bleeding, 46 cases of eclampsia, nine cases of infection, one case of prolonged labor, one case of abortion, and others of 54 cases (Lampung Provincial Health Office, 2016).

In particular, the prevalence of anemia in pregnancy in Lampung Province is the highest on the island of Sumatra. The high number of anemias in Lampung Province is 69.7%; this figure is higher than the national nutritional anemia rate of 63% (Lampung Provincial Health Office, 2016). Meanwhile, the incidence of anemia in pregnant women in the South Lampung Regency in 2016 was (43.1%) (Profile of the South Lampung District Health Office, 2016).

Prevention and treatment of anemia can be determined by considering the factors that cause it. If the cause is nutritional problems, an assessment of nutritional status is needed to identify the nutrients that play a role in anemia. Nutritional anemia can be caused by a variety of essential nutrients in the formation of hemoglobin. Fe deficiency, which is common globally, is the main cause of nutritional anemia. Lack of iron in the diet can cause anemia, so extra iron is needed in pregnancy. The need for iron in pregnancy with a single fetus is 200-600 mg to meet the increase in red blood cell mass; 200-370 mg for fetus depending on birth weight; 150-200 mg for external loss; 30-170 mg for umbilical cord and placenta; 90-310 mg to replace blood lost during delivery. Thus, to overcome this loss, pregnant women need an average of 3.5-4 mg of iron per day, while the need for iron for pregnant women with mild anemia is 60-120 mg/day (Asrinah et al., 2010).

Giving iron to pregnant women is one of the requirements for health services for pregnant women to prevent anemia, where the number of iron supplements given during pregnancy is 90 tablets (Fe3+) (Willeam R. & Oxorn, 2010).

One way to increase hemoglobin levels in pregnant women is to increase nutritious foods, such as meat, fish, chicken, liver, eggs, nuts, tempeh, *katuk* leaves, cassava leaves, sweet potatoes, spinach, guava, tomatoes, and citrus (Willeam R. & Oxorn, 2010).

Sweet potatoes have high nutritional value and are rich in vitamins and minerals. One hundred

grams of sweet potato contains energy (123 kcal), protein (2.7 g), fat (0.79 g), minerals calcium (30 mg), phosphorus (49 mg), iron (4 mg), vitamin B-1 (0.09 mg), vitamin B-2 (0.32 mg), vitamin C (2-20 mg), and water (68.5%). The fat content in sweet potatoes is also quite low (Khalil, 2016). Based on the color of the tubers, the types of tubers are purple, orange, yellow, and white sweet potatoes. Another advantage of sweet potatoes is the variety of flesh colors, indicating the bioactive components and taste. Yellow, orange, to orange tuber flesh indicates the presence of beta-carotene, which functions as vitamin A in the human body (Khalil, 2016).

In addition, sweet potato is one of the crops with the potential to be developed for diversification of food consumption and is a type of tuber relatively resistant to storage, where the longer it is stored, the sweeter the taste. Sweet potatoes' chemical properties and pharmacological effects are sweet, cold, and astringent (Khalil, 2016).

Also, sweet potatoes contain 4 mg of iron in 100 grams, so pregnant women can consume sweet potatoes to increase hemoglobin levels in red blood cells and prevent and treat anemia because they are rich in iron (Khalil, 2016).

Based on the pre-survey results conducted at Puskesmas Branti in January 2020, 138 third trimester pregnant women made ANC visits, of which 30 pregnant women had low hemoglobin levels. Based on direct observation data in the working area of Puskesmas Branti, it was found that the average community in the working area of Puskesmas Branti had farming activities, the average resident had a sweet potato garden, and the structure of the Branti Raya area has fertile soil.

Based on the above background, the researchers wanted to conduct a study on "Sweet Potatoes Consumption Against Hemoglobin Levels of Pregnant Women in the Third Trimester."

RESEARCH METHODOLOGY

This quantitative research aimed to cover the variables in the study and the relationship between these variables, the participants, and the research location. These objectives were written in the language of quantitative research and sometimes included deductive testing of certain relationships or theories (Creswell, 2017). It was conducted at Puskesmas Branti, South Lampung Regency and in June-July 2020. This study used a quasi-experimental approach with a two-group pretest-posttest method, where this design is like a pretest-posttest design and has a control group (Notoatmodjo, 2014).

The population is a generalization area consisting of objects or subjects with certain quantities and characteristics determined by researchers to be studied (Setiadi, 2007). In March, the population in this study was all pregnant women in the third trimester who performed antenatal care (ANC) at Puskesmas Branti, South Lampung Regency, as many as 138 pregnant women in the third trimester.

Meanwhile, the sample is part of the number and characteristics possessed by the population (Sugiono, 2014). Thus, the sample in this study was all pregnant women in the third trimester at Puskesmas Branti, South Lampung Regency, at the time of the study, as many as 20 pregnant women. In the intervention group, ten pregnant women were given sweet potato and Fe tablets, while ten pregnant women in the control group were treated with Fe tablets. The sample met the inclusion and exclusion criteria.

Inclusion criteria in this study were willing to be research subjects and pregnant women with mild and moderate anemia. Meanwhile, the exclusion criteria in this study were pregnant women with severe anemia (HB < 8), pregnant women with nausea and vomiting, and pregnant women who did not like sweet potatoes. Using the purposive sampling technique, sampling was based on certain considerations made by the researchers based on the characteristics of the population known previously (Kusuma, 2011).

RESEARCH RESULTS
Characteristics of Intervention Respondents

Table 1
Frequency Distribution of Intervention Respondents' Characteristics at Puskesmas Branti, South Lampung Regency in 2020

Category	Frequency	Percentage (%)
Age		
< 20 Years	0	0.0
20 – 35 Years	9	90.0
>35 Years	1	10.0
Education		
D3	2	20.0
Senior High School	5	50.0
Junior High School	3	30.0
Profession		
Laborer	2	20.0
IRT	3	30.0
Private	2	20.0
Entrepreneurs	3	30.0
Parity		
Multigravida	4	40.0

Primigravida	6	60.0

Based on Table 1, in Puskesmas Branti, South Lampung Regency in 2020, most respondents were aged 20-35 years, which amounted to nine respondents (90.0%), most of the respondents' education was high school, which amounted to five respondents (50.0%), most respondents' profession as household workers and entrepreneurs, amounting to three respondents (30.0%), and the average respondent being pregnant for the first time (primigravida), which amounted to six respondents (60.0%).

Univariate Analysis
Mean of Hb Levels Before and After Consuming Sweet Potatoes in Intervention Respondents
Based on Table 2, at Puskesmas Branti, South Lampung Regency in 2020, the mean Hb level of intervention respondents before consuming sweet potatoes was 11.230 (10.6-11.7) and after consuming sweet potatoes was 12.530 (11.4-13.2).

Table 2
The Mean of Hb Levels Before and After Consuming Sweet Potatoes at Puskesmas Branti, South Lampung Regency in 2020

Variable	N	Mean	Minimum	Maximum	SD	SE
Before	10	11.230	10.6	11.7	0.3831	0.1212
After	10	12.530	11.4	13.2	0.5143	0.1627

Mean of Hb Levels Before and After Consuming Fe Tablet Tablets

Table 3
The Mean of Hb Levels Before and After Consuming Fe Tablets at Puskesmas Branti, South Lampung Regency in 2020

Variable	N	Mean	Minimum	Maximum	SD	SE
Before	10	11.060	10.1	11.8	0.5147	0.1628
After	10	11.870	11.2	12.5	0.4809	0.1521

Based on Table 3, at Puskesmas Branti, South Lampung Regency in 2020, the mean Hb level of intervention respondents before consuming Fe tablets was 11.060 (10.1-11.8), and after consuming Fe tablets, it was 11.870 (11.2-12.5).

Bivariate Analysis
To determine the effect of sweet potato consumption on hemoglobin levels of pregnant women in the third trimester at Puskesmas Branti, South Lampung Regency, in 2020, the paired sample t-test was used:

The Effect of Sweet Potato Consumption on Hemoglobin Levels of Pregnant Women in the Third Trimester in the Intervention Group at Puskesmas Branti, South Lampung Regency in 2020

Table 4
The Effect of Sweet Potato Consumption on Hemoglobin Levels of Pregnant Women in the Third Trimester in the Intervention Group

Variable	N	Mean	Difference	SD	SE	P-Value
Before	10	11.230	1.300	0.3831	0.1212	0.000
After		12.530		0.5143	0.1627	

Based on Table 4, at Puskesmas Branti, South Lampung Regency in 2020, the mean Hb level of respondents before being given sweet potatoes was 11.230 and after being given sweet potatoes was 12.530, with a difference of 1.300.
The bivariate analysis using the paired sample t-test showed that the p-value was <0.05, which was 0.000. It indicates an effect of sweet potato consumption on the hemoglobin levels of pregnant women in the third trimester at Puskesmas Branti, South Lampung Regency, in 2020.

The Effect of Sweet Potato Consumption on Hemoglobin Levels of Pregnant Women in the

Third Trimester in the Control Group

Based on table 5, at Puskesmas Branti, South Lampung Regency in 2020, the mean Hb level of respondents before being given Fe tablets was 11.060, and after being given Fe tablets, it was 11.870, with a difference of 0.810.

Table 5
The Effect of Sweet Potato Consumption on Hemoglobin Levels of Pregnant Women in the Third Trimester in the Control Group at Puskesmas Branti, South Lampung Regency in 2020

Variable	N	Mean	Difference	SD	SE	P-Value
Before	10	11.060	0.810	0.5147	0.1628	0.000
After		11.870		0.4809	0.4809	

Based on bivariate analysis using paired sample t-test, the p-value was < 0.05, which was 0.000, meaning that there was an effect of sweet potato consumption on hemoglobin levels of pregnant women in the third trimester at Puskesmas Branti, South Lampung Regency in 2020.

DISCUSSION
Univariate Analysis
Mean of Hb Levels Before and After Consuming Sweet Potatoes in Intervention Respondents

Based on the study results, at Puskesmas Branti, South Lampung Regency, in 2020, the mean Hb level of intervention respondents before consuming sweet potatoes was 11.230 (10.6-11.7) and after consuming sweet potatoes was 12.530 (11.4- 13.2).

Pregnant women are anemic if their blood hemoglobin is less than 11gr%. Anemia can be caused by low iron intake, impaired absorption, and iron loss.

Nutritional factors that cause anemia result from a lack of total iron in the diet or poor quality of iron. The danger of anemia in pregnant women affects not only their safety but also the fetus (Prawirohardjo S., 2010).

Anemia in pregnant women is if the hemoglobin level is <11 g/dl in the first trimester (0-13 weeks) and third trimester (28-40 weeks), and <10.5 g/dl in pregnant women in the second trimester (14-27 weeks).

Anemia in pregnancy has an unfavorable effect on the mother in pregnancy, childbirth, postpartum, and later. Complications that can arise due to anemia are miscarriage (abortion), premature birth, prolonged labor due to uterine muscle fatigue when contracting (uterine inertia), postpartum bleeding due to lack of uterine muscle contractions (uterine atony), shock, infection either during labor and postpartum, and severe anemia (<4 g%) which can cause cardiac decompensation. Hypoxia due to anemia can also cause shock and maternal death in childbirth (Prawirohardjo S., 2010).

The most common cause of anemia in pregnancy is iron deficiency. It is crucial to check for anemia at the first visit of pregnancy. Even if mothers are not anemic at the first visit, developing anemia in later pregnancies is still possible. Anemia is also caused by a lack of consumption of foods containing iron or a disturbance in iron absorption in the body (Jannah, 2012).

Anemia most often encountered in pregnancy is anemia due to iron deficiency due to a lack of iron intake in the diet. It could be due to impaired absorption, increased need for iron, or excessive iron excreted from the body, such as in bleeding. Pregnant women need about 40 mg of iron per day or twice the need for non-pregnant conditions. The distance of pregnancy is also very influential on the incidence of anemia during pregnancy. Repeated pregnancies in a short time will deplete the mother's iron stores. Good pregnancy spacing of at least two years is vital to note so that the mother's body is ready to receive the fetus again without spending its iron reserves (Prawirohardjo S., 2010).

The research results and theory above align with Farida Amalia Yuliandani's (2017) research with the title *"The Effect of Consumption of Sweet Potatoes on Increasing Hemoglobin Levels of Pregnant Women in the Third Trimester."* The research was conducted at Puskesmas Genuk, Semarang City. Using a total sampling technique, the study used a quasi-experimental, with the study population of pregnant women TM III at Puskesmas Genuk, Semarang City. The results showed that sweet potato consumption influenced increasing hemoglobin levels of pregnant women, as indicated by a p-value of 0.000.

Based on the research results and discussion above, the mean of Hb before consuming sweet potatoes for all pregnant women, especially those in the third trimester who experienced moderate anemia, was 8-9 gr%. It was due to several influencing factors, such as maternal age, parity, less consumption of fruits and vegetables containing vitamin C (oranges, mangoes, bananas, others) and

vegetables containing iron (spinach, carrots, mustard greens, broccoli, nuts, and others), gastrointestinal infections, congenital diseases, pregnancy spacing, and education.

Mean of Hb Levels Before and After Consuming Fe Tablet Tablets

Based on the study results, at Puskesmas Branti, South Lampung Regency, in 2020, the mean Hb level of intervention respondents before consuming Fe tablets was 11.060 (10.1-11.8), and after consuming Fe tablets, it was 11.870 (11.2-12.5).

Prevention and treatment of anemia can be determined by considering the factors that cause it. If the cause is nutritional problems, an assessment of nutritional status is needed to identify the nutrients that play a role in anemia. Nutritional anemia can be caused by a variety of essential nutrients in the formation of hemoglobin. Fe deficiency, which is common globally, is the main cause of nutritional anemia. Lack of iron in the diet can cause anemia, so extra iron is needed in pregnancy. The need for iron in pregnancy with a single fetus is 200-600 mg to meet the increase in red blood cell mass; 200-370 mg for fetus depending on birth weight; 150-200 mg for external loss; 30-170 mg for umbilical cord and placenta; 90-310 mg to replace blood lost during delivery. Thus, to overcome this loss, pregnant women need an average of 3.5-4 mg of iron per day, while the need for iron for pregnant women with mild anemia is 60-120 mg/day (Prawirohardjo, S. 2010)

Giving iron to pregnant women is one of the requirements for health services for pregnant women to prevent anemia, where the number of iron supplements given during pregnancy is 90 tablets (Fe3+) (Indonesian Ministry of Health, 2015). One way to increase hemoglobin levels in pregnant women is to increase nutritious foods, such as meat, fish, chicken, liver, eggs, nuts, tempeh, *katuk* leaves, cassava leaves, sweet potatoes, spinach, guava, tomatoes, and orange (Khalil, 2016)

The research results and theory above are consistent with Ulfiana's (2019) research titled *"The Effect of Consumption of Sweet Potatoes on Increased Hemoglobin Levels."* The results showed that sweet potato consumption affected increasing hemoglobin levels of pregnant women, indicated by a p-value of 0.000. Based on the study results, it is hoped that midwives can improve health services, especially to overcome anemia in pregnant women, by providing health education about the benefits of sweet potatoes as an alternative food ingredient that can increase maternal hemoglobin levels and prevent anemia. Midwives can also recommend that

pregnant women consume not only Fe tablets but also other food sources containing iron, one of which is by consuming sweet potatoes.

Based on the study results above, the average number of pregnant women in the third trimester who experienced anemia after consuming Fe tablets increased. It was because the effect of Fe tablets gave a not-so-great effect compared to sweet potato administration.

The Effect of Sweet Potato Consumption on Hemoglobin Levels of Pregnant Women in the Third Trimester

Based on the study results, at Puskesmas Branti, South Lampung Regency in 2020, respondents' mean Hb level before being given sweet potatoes was 11.230 and after being given sweet potatoes was 12.530, with a difference of 1.300.

Based on bivariate analysis using paired sample t-test, it is known that the p-value was <0.05, which was 0.000. It denotes the effect of sweet potato consumption on the hemoglobin levels of pregnant women in the third trimester at Puskesmas Branti, South Lampung Regency, in 2020.

Treatment for anemia in pregnant women is usually given oral iron supplements, which can cause nausea, vomiting, stomach cramps, heartburn, and constipation (sometimes diarrhea). However, the degree of nausea caused by each preparation depends on the amount of elemental iron absorbed. Iron doses above 60 mg can cause unacceptable side effects in pregnant women, resulting in non-compliance in using low-dose iron tablets, which are more likely to be tolerated (and taken) than high doses. For many women, a low dose is sufficient (Prawirohardjo S., 2010).

During pregnancy, giving iron tablets is one of the most suitable ways for pregnant women to increase Hb levels to the desired level. Giving 300 calories/day of calories and 60 mg/day of iron supplements would be enough to prevent anemia, where 60-65 mg of Fe is equivalent to 200 mg of ferrous sulfate (Prawirohardjo S., 2010).

In addition, the administration of iron tablets to pregnant women was not accompanied by the addition of vitamin C (only 15.8% received vitamin C). In fact, vitamin C can absorb iron well. Currently, the national program recommends a combination of 60 mg of iron and 50 nanograms of folic acid for anemia prophylaxis, where the administration of 60 mg/day of iron (Fe) preparations can increase Hb levels by 1gr%/month (Prawirohardjo S., 2010).

In this case, sweet potato is one of the potential crops to be developed for diversification of

food consumption and is a type of tuber relatively resistant to storage, where the longer it is stored, the sweeter the taste. Sweet potatoes' chemical properties and pharmacological effects are sweet, cold, and astringent (Prawirohardjo S., 2010).

Sweet potatoes contain 4 mg of iron in 100 grams (Khalil M., 2016), so pregnant women can consume sweet potatoes to increase hemoglobin levels in red blood cells and prevent and treat anemia because they are rich in iron.

According to Elisa Ulfiana's (2019) research under the title *"The Effect of Giving Purple Sweet Potatoes on Increased Hemoglobin Levels in Pregnant Women in the Third Trimester,"* the study results revealed that the hemoglobin levels of pregnant women before being given intervention were 10.8545 on average in the intervention group and 10.4636 on average in the control group, with most of them experiencing mild anemia as many as 13 respondents (59%). After consuming sweet potatoes, 18 respondents (81.9%) became normal. The mean hemoglobin level of pregnant women after being given the intervention was 11.4318 in the intervention group, and the mean was 10.6455 in the control group, with most of them experiencing mild anemia as many as 15 respondents (68.2%) before consuming Fe tablets and still mild anemia as many as 12 respondents (54.5%) after consuming Fe tablets. Consumption of sweet potatoes affects increasing the hemoglobin level of pregnant women because the study results showed that the hemoglobin level of pregnant women after being given the intervention experienced an increase in Hb levels of 0.58 in the intervention group and a mean increase of 0.18 in the control group.

Based on the study results, there was a difference between Hb levels in pregnant women in the third trimester who experienced anemia in respondents who consumed sweet potatoes and Fe tablets and respondents who only consumed Fe tablets. It could be known from the value of the difference between the two groups. For intervention respondents, it was known that the difference between before and after consuming sweet potato was 2.05, while the control group respondents (given Fe tablets) had a smaller difference of 0.800. It proves that sweet potatoes greatly affect the increase in Hb levels of pregnant women in the third trimester.

CONCLUSION

Based on the research results above, the conclusion in this study is that there was an effect of sweet potato consumption on hemoglobin levels of pregnant women in the third trimester at Puskesmas

Branti, South Lampung Regency, in 2020.

SUGGESTION

From the results of this study, it is hoped that the community can take advantage of the presence of sweet potatoes around their homes. It is also expected that respondents are always diligent in visiting the nearest health service to seek health information about the handling of anemia in pregnant women. In addition, respondents are expected to be more routine in consuming sweet potatoes every day, namely in the morning before eating 200 grams and at night before going to bed as much as 200 grams.

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