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The Effect of Tablet Fe on Improvement Hemoglobin in Adolescent Women Region Mining Morosi District

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ABSTRACT

Introduction: Anemia is one of the nutritional problems in adolescents, especially at the Morosi Health Center with a prevalence of anemia in June 2022 of 27.95% who have an Hb of 9-10 g/dl, 9.67% have a Hb of 7-8 g/dl and 1.07% Hb < 7 g/dl. The purpose of this study was to determine the effect of giving Fe tablets to increase hemoglobin in young women in the mining area of Morosi District.

Method: This type of research is pre-experimental, with a one-group pre-test-post-test design. The population is part of young women in Wonua Morini Village, Besu Village and Mendikonu Village, amounting 72 people taken using Proportionate stratified random Sampling technique. Hb level data was obtained by easy touch meter. The data were analyzed using Wilcoxon sign rank test.

Result: Showed the average Hb level before intervention was 11,38 g/dl and after intervention was 11,38 g/dl. The second week 11,68 g/dl after the intervention. The third week after the intervention 12.86 g/dl and the fourth week after the intervention was 12.86 g/dl. The results of the Wilcoxon sign rank test obtained p-value (0.000) < (0.05).

Conclusion: There is an no effect of giving Fe tablets in the first and there was effect of giving Fe tablet in Second to fourth weeks of increasing hemoglobin in young women in the mining area of Morosi District. Research suggests for young women to routinely consume blood-added tablets once a week.

Introduction

Anemia is a global public health problem in both developing and developed countries and has serious implications for human health. which affects a quarter of the world's population. Iron deficiency is the main cause of anemia. Anemia is

associated with chronic fatigue, impaired cognitive function, and decreased well-being.^[1]

The World Health Organization, released data about 2.3 billion people in the world living with anemia, half of which are caused by iron and partly because of iron deficiency as the basis for forming hemoglobin.^[2] This condition is

particularly prevalent in preschool children (<5 years), women of reproductive age and pregnant women with prevalence rates reaching up to 41.7%, 32.8% and 40.1%, respectively (Health Observation Data Global 2016) data in Southeast Asia and Africa has the highest anemia rate reaching 85 percent. While in Indonesia there are 1 in 3 pregnant women, women of childbearing age 15-49 years with the fifth highest number of anemia sufferers in the world.^[3] Anemia is a major nutritional problem in Indonesia. The prevalence of iron deficiency anemia remains high. Household Health Survey data shows the prevalence of anemia in adolescent girls (10-14 years): 57.1%. Decreased anemia in women of childbearing age (15-44 years) and pregnant women in the 1995 and 2001 Household Health Survey, from 39.5% to 27% in women of childbearing age and from 50.9% to 40% in gravidarum mothers.^[4]

The latest data recap data related to adolescent girls with hemoglobin below 13.5 mg% District in Southeast Sulawesi Province in 2021. Young women are most at risk of anemia, because their menstrual cycle is able to produce 27 ml of blood per menstrual cycle. Young women desperately need more energy, protein, iron and other nutrients, because young women are still in their infancy and need to replenish iron to replace nutrients lost during menstruation.^[5]

One of the causes of anemia is a poor diet or low iron intake. Poor diet in small amounts inhibits adolescent growth, because the amount of food consumed such as rice will decrease. Eating boring and rich in addictive substances can block the absorption of iron so that iron cannot be used in the body. Iron deficiency can also be affected by poor nutritional status, especially those associated with folic acid and vitamin A or B12 deficiencies, as occurs in developing countries.^[6] Previous research has shown that government efforts to overcome nutritional anemia do not always run well and effectively. In line with research showing the occurrence of anemia in addition to the availability of iron tablets and the side effects caused by tablets, other factors were found that affect the effectiveness of iron supplementation programs such as the quality of iron supplementation, how to administer iron supplements. to socialize with young women, the

role of parents, stakeholder cooperation, and cadre training.^[7]

Anemia due to iron deficiency causes fatigue in the end this condition causes them to be unable to compete for work opportunities. Teenagers need more iron and women certainly need more to replace the iron that is wasted with menstrual blood.^[8] The initial observation made by researchers at Wonua Morini Village, Morosi Mining Area, was that many young women were anemic due to a lack of hemoglobin levels so that it had a bad influence on nutritional health for young women in the Morosi Mining Area, especially in Mendikonu village, Wonua Morini village and Besu village.

It is known that the medical records of the Morose Health Center, Cases of Anemia in Women aged 12 to 18 years in the Morosi Mining Area, especially in Mendikonu Village, Wonua Morini Village and Besu Village are still found, from 93 teenage girls who were examined in April found 15 female students (16,12%) with Hb 9-10% gr, 5 students (5.47%) with Hb 7-8% gr 1 student (1.07%) < 7% gr, cases of Anemia in May 14 students (15.05%) with Hb 9-10%gr, 4 students (4.30%) with Hb 7-8% gr, Hb <7% gr not found, cases of anemia in June 26 students (27.95%) with Hb 9-10% gr, 9 female student (9.67%) with Hb 7-8% gr 1 female student (1.07%) < 7% gr.^[9]

Anemia Management Program in Konawe Regency has entered its fifth year. In 2017 the initial program was implemented and has not been effectively implemented, data obtained from the Morosi Health Center which is also the first Health Facility in the Morosi sub-district where the provision of Blood Add Tablets is scheduled for every month coupled with the Mobile Health Center or the youth posyandu. The results of the preliminary survey conducted by the researchers found that from 3 villages, namely Mendikonu Village, Wonua Morini Village and Besu Village, there were 93 young women, 36 (38.70%) with specific anemia cases, then in June 2022 as many as 26 students (27, 95%) in the heavy category (<9 g/dl), 9 students (9.67%) in the light category and 1 student (1.07%) in the medium category. Adolescents who suffer from anemia can cause symptoms of loss of appetite, difficulty focusing, decreased immune system and behavioral disorders as well as learning difficulties.

Method

The type of research carried out is a pre-experimental study with a pretest-posttest design regarding the effect of giving blood supplements to increasing hemoglobin levels in adolescent girls.^[10] The study was conducted from July to August 2022 on young women in WonuaMorini Village, Besu Village and Mendikonu Village. The population in this study were young women in WonuaMorini Village, Besu Village and Mendikonu Village, amounting to 87 people on a visit in June 2022. The sample size for this study used a population sample of relative precision with the population that will be sampled by young women with hemoglobin levels. which is low in WonuaMorini Village, Besu Village and Mendikonu Village as many as 72 people. The sampling method using Proportionate Stratified Random Sampling is a sampling process through the process of dividing the population into strata, selecting a simple random sample from each stratum, and combining them into the sample to estimate the population parameters.

Obtaining primary data through direct observation using the Observation sheet or checklist. The primary data include: 1) Identity collected by using a questionnaire 2) Blood pressure before and after treatment collected by using the observation sheet Method of data collection This study used research instruments in the form of Observation Sheets from the observations of Pre and Post researchers and the Easy Touch Meter (Hb examination tool). Data analysis used descriptive and inferential analysis using the Kolmogorov-Smirnov normality test, then the Wilcoxon sign rank test. The presentation of the data in this study is presented in the form of frequency distribution tables and graphs and explanations are given in the form of narration.

Result

Table 1 shows that after the normality test using Kolmogorov Smirnov, it can be seen that the p value for the first week Hb level is 0.031, the p value for the second week Hb level is 0.045, the third week Hb level is 0.011, and the fourth week Hb level is 0.002 <(0.05) so that the data is not

normally distributed and the Wilcoxon Sign Rank Test is carried out.

Table 2 shows that from 72 samples, the average (mean) blood hemoglobin level in the first week before being given blood-added tablets (Fe) was 10.38 g/dl with the lowest Hb level being 9 g/dl and the highest being 11.4 g/dl, then after being given blood (Fe) tablets with a dose of 250 mg (1 tablet dose) for one day, the blood hemoglobin level remained or did not increase, namely 9 g/dl with the lowest Hb level being 11.4 g/dl. dl and the highest is 9 g/dl. The average increase in Hb reached 11.4 g/dl. The results of statistical tests using the Wilcoxon Sign Rank Test obtained a p value of 1,000 > (0.05), then H_a was rejected and H_0 was accepted, so it was concluded that there was no effect of giving blood-supplemented tablets (Fe) on the increase in hemoglobin levels in the first week with a dose of 250 mg (1 tablet dose) for one day for Young Women in the Mining Area of Morosi District.

Table 3 shows that from 72 samples, the average (mean) blood hemoglobin level in the second week before being given blood-added tablets (Fe) was 10.38 g/dl, with the lowest Hb level being 9 g/dl and the highest being 11.4 g/dl, then after being given blood (Fe) tablets with a dose of 250 mg (1 tablet dose) for one day, the blood hemoglobin level became 10.94 g/dl, with the lowest Hb level being 9 g/dl and the highest being 9.5 g/dl. The average increase in Hb reached 0.6 g/dl. The results of statistical tests using the Wilcoxon Sign Rank Test obtained a p value of 0.000 < (0.05), then H_a was accepted and H_0 was rejected, so it was concluded that there was an effect of giving blood supplement tablets (Fe) on the increase in hemoglobin levels in the second week with a dose of 250 mg (1 tablet dose) for one day for Young Women in Mining Area, Morosi District.

Table 4 shows that from 72 samples, the average (mean) blood hemoglobin level in the third week before being given blood-added tablets (Fe) was 10.38 g/dl, with the lowest Hb level being 9 g/dl and the highest being 11.4 g/dl, then after being given blood (Fe) tablets with a dose of 250 mg (dose of 1 tablet) for one day, the adolescent's blood hemoglobin level became 11.67 g/dl, with the lowest Hb level being 10.4 g/dl. dl and the highest is 13.2 g/dl. The average increase in Hb reached 2.32 g/dl. The results of statistical tests using the Wilcoxon Sign Rank Test obtained a p

value of $0.000 < (0.05)$, then H_a was accepted and H_0 was rejected, so it was concluded that there was an effect of giving blood supplement tablets (Fe) to increase hemoglobin levels in the third week with a dose of 250 mg (1 tablet dose) for one day for Young Women in Mining Area, Morosi District.

Table 5 shows that from 72 samples, the average (mean) blood hemoglobin level in the fourth week before being given blood-added tablets (Fe) was 10.38 g/dl, with the lowest Hb level being 9 g/dl and the highest being 11,4 g/dl, then after being given a tablet with added blood (Fe) with a dose of 250 mg (1 tablet dose) for one day, the

hemoglobin level of the adolescent's blood became 12.86 g/dl, with the lowest Hb level being 11.6 g/dl and the highest is 14.6 g/dl. The average increase in Hb reached 2.48 g/dl. The results of statistical tests using the Wilcoxon Sign Rank Test obtained a p value of $0.000 < (0.05)$, then H_a was accepted and H_0 was rejected, so it was concluded that there was an effect of giving blood supplement tablets (Fe) to increase hemoglobin levels in the fourth week with a dose of 250 mg (1 tablet dose) for one day for Young Women in Mining Area, Morosi District.

Table 1.
Hb Level Normality Test Results in Young Women

| Variable | <i>P-value</i> | Description |
|----------------------|----------------|-------------|
| First week Hb level | 0,031 | Abnormal |
| Second week Hb level | 0,045 | Abnormal |
| Third week Hb level | 0,011 | Abnormal |
| Fourth week Hb level | 0,002 | Abnormal |

Table 2.
Effect of Blood Add Tablet (Fe) on increasing hemoglobin levels in the first week with a dose of 250 mg (1 tablet dose) for one day in Young Women in Mining Areas, Morosi District

| Measurement Time (First Week) | n | Mean (g/dl) | Min(g/dl) | Max(g/dl) | <i>P value</i> |
|---|----|-------------|-----------|-----------|----------------|
| Before Giving Tablets Add Blood (Fe) (Pre Test) | 72 | 10,38 | 9 | 11,4 | 1,000 |
| After Giving Blood (Fe) Tablets (Post Test) | 72 | 10,38 | 9 | 11,4 | |

Table 3.
Effect of Blood Add Tablet (Fe) on increasing hemoglobin levels in the second week with a dose of 250 mg (1 tablet dose) for one day in Young Women in Mining Areas, Morosi District

| Measurement Time (Second Week) | n | Mean (g/dl) | Min(g/dl) | Max(g/dl) | <i>P value</i> |
|---|----|-------------|-----------|-----------|----------------|
| Before Giving Tablets Add Blood (Fe) (Pre Test) | 72 | 10,38 | 9 | 11,4 | 0,000 |
| After Giving Blood (Fe) Tablets (Post Test) | 72 | 10,94 | 9,5 | 12,1 | |

Table 4.

The Effect of Giving Blood Add Tablets (Fe) on increasing hemoglobin levels in the third week with a dose of 250 mg (1 tablet dose) for one day in Young Women in Mining Areas, Morosi District

| Measurement Time (Third Week) | n | Mean (g/dl) | Min(g/dl) | Max(g/dl) | <i>P value</i> |
|---|----|-------------|-----------|-----------|----------------|
| Before Giving Tablets Add Blood (Fe)(Pretest) | 72 | 10,38 | 9 | 11,4 | 0,000 |
| After Giving Blood (Fe) Tablets (Post Test) | 72 | 11,67 | 10,4 | 13,2 | |

Table 5.

Effect of Blood Add Tablet (Fe) on increasing hemoglobin levels in the fourth week with a dose of 250 mg (1 tablet dose) for one day in Young Women in Mining Areas, Morosi District

| Measurement Time (Fourth Week) | n | Mean(g/dl) | Min(g/dl) | Max(g/dl) | <i>P value</i> |
|--|----|------------|-----------|-----------|----------------|
| Before Giving Tablets Add Blood (Fe) (Pretest) | 72 | 10,38 | 9 | 11,4 | 0,000 |
| After Giving Blood (Fe) Tablets (Post Test) | 72 | 12,86 | 11,6 | 14,6 | |

Discussion

The Effect of Giving Blood Supplement Tablets (Fe) on the Increase in Hemoglobin Levels in the First Week

The results of this study showed that from 72 samples, the average blood hemoglobin level in the first week before being given blood-added tablets (Fe) was 10.38 g/dl, with the lowest Hb level being 9 g/dl and the highest being 11.4 g. /dl, it can be seen that before the intervention, the blood hemoglobin level of adolescents was still below the normal standard of 12 g/dl so that adolescents were categorized as anemic. Then after being given blood-added tablets (Fe), blood hemoglobin levels did not increase, namely the average Hb level was 10.38 g/dl with the lowest Hb level being 9 g/dl and the highest being 11.4 g/dl. The blood-added tablet given has a dose of 250 mg (1 tablet dose) for one day so that for 1 week the Fe tablets consumed are 7 tablets with a dose of 1,750 mg. This explains that in the first week of intervention, the adolescent's Hb level did not increase so that the teenager was still categorized as anemic because his Hb level was still below the standard 12 g/dl.

The results of statistical tests using the Wilcoxon Sign Rank Test found that there was no effect of giving blood (Fe) tablets to increase

hemoglobin levels in the first week with a dose of 250 mg (1 tablet dose) for one day in adolescent girls in the mining area of Morosi District, according to the assumption This happened because the dose of blood-added tablets consumed was still low and was still consumed for 1 week routinely so that the blood hemoglobin levels of adolescent girls did not change.

This study is not in line with the research of YockiYuanti et al., (2020), which found that the average Hb level of anemic adolescent girls increased by 1.550 with p value = 0.001 meaning that there was a significant effect of giving Fe tablets on the increase in Hb levels of adolescent girls who had anemia.^[11] The cause of the low Hb of adolescents is thought to be caused by the condition of young women who have experienced menstruation. This is reinforced by Syaifuddin's theory that several causes of hemoglobin loss are Menstruation where there is a regular cycle of endometrial shedding Syaifuddin (2010) in response to hormonal reactions produced by the hypothalamus, pituitary gland, and ovaries. The menstrual cycle can be divided into two phases: (1) the follicular phase or proliferative phase, and (2) the zero phase or secretory phase. The length of the menstrual cycle is the number of days between the first day of menstruation from one

period to the start of the menstrual cycle the next day. The average length of the menstrual cycle is 28 days with the longest cycles ranging from 25 to 30 days (1-3). Patients whose menstrual cycles occur at intervals of less than 21 days are called polmenorrhoea, while patients who have long menstrual cycles of more than 35 Yuma are called oligomenorrhoea.^[12] This research is reinforced by the theory put forward by Arthur C (2014) that hemoglobin is an oxygen-binding protein found in red blood cells that carries oxygen from the lungs to the tissues. Hemoglobin is a complex protein consisting of globin protein and a non-protein compound called heme.^[11]

The Effect of Giving Blood Supplement Tablets (Fe) on the Increase in Hemoglobin Levels in the Second Week

The results of this study showed that from 72 samples, the average (mean) blood hemoglobin level in the second week before being given blood-added tablets (Fe) was 10.38 g/dl, with the lowest Hb level being 9 g/dl and the highest being 11.4 g/dl, then after being given blood (Fe) tablets with a dose of 250 mg (1 tablet dose) for one day, the blood hemoglobin level became 10.98g/dl, with the lowest Hb level being 9.5 g/dl and the highest was 12.1 g/dl. The average increase in Hb levels was accumulated from the first day of administration of blood-added tablets so that in the second week the dose reached 3,500 mg (14 tablets dose). In the second week of intervention the Hb level before the intervention was still below the Hb standard so that adolescents were still in the category of Anemia and after being given the intervention for 2 weeks, there had been an increase with an average increase of 0.6 g/dl, in the second week there were also adolescents whose blood levels were low. His Hb is above the normal standard, so it has been found that several teenagers who do not have anemia with Hb levels reach 12 g/dl.

The results of statistical tests using the Wilcoxon sign rank test obtained a p value of 0.000, so it was concluded that there was an effect of giving blood-added tablets (Fe) to increase hemoglobin levels in the second week with a dose of 250 mg (1 tablet dose) for one day in adolescent girls in Morosi District mining area. According to the researcher's assumption, the increase in Hb levels is due to the consumption of Fe tablets

which are taken regularly by adolescents, in this study to monitor the Fe tablets consumed, the researchers cooperated with the respondent's parents to motivate and ensure their children to take the tablets added to the blood given so that adolescents do not forgot to take it every day, besides that the researchers also carried out direct monitoring of young women by reminding young women to take Fe tablets regularly. Therefore, the more Fe tablets consumed, the more direct effect on the increase in blood hemoglobin levels of adolescent girls.

This study is in line with the research of Irwan (2021) who found that the average (mean) Hb level before administration of blood-added tablets was 10.63 mg/dl, the lowest Hb level was 7 mg/dl and the highest Hb level was 11.9 mg. /dl. Then after being given blood-added tablets for 4 weeks with a frequency of 1 tablet/week, the adolescent's Hb level was 12.19 mg/dl, the lowest Hb level was 10 mg/dl and the highest Hb was 15.3 mg/dl. Increased Hb levels by 2.56 mg/dl. The results of statistical tests using the Wilcoxon sign rank test obtained a p value of $0.000 < (0.05)$ so that it was concluded that there was an effect of giving blood-added tablets on hemoglobin (Hb) levels in anemic adolescent girls at Senior High School 6 Baubau with a p value of 0.000.^[13] This research is reinforced by the theory put forward by Supariasa (2015) that hemoglobin is an indicator that is widely used to determine the prevalence of anemia. Hemoglobin is the compound that carries oxygen in red blood cells. Hemoglobin can be measured chemically and the amount of g/100ml of blood can be used as an indicator of the blood's ability to carry oxygen. So, a low hemoglobin level indicates anemia.^[14]

The Effect of Giving Blood Supplement Tablets (Fe) on the Increase in Hemoglobin Levels in the Third Week

This study showed that from 72 samples, the average (mean) blood hemoglobin level in the third week before being given blood-added tablets (Fe) was 10.38 g/dl, with the lowest Hb level being 9 g/dl and the highest being 11.4 g/dl, this means that before the intervention the adolescent's Hb level was still below normal for the female Hb standard of 12 g/dl. Then after being given blood (Fe) tablets with a dose of 250 mg (1 tablet dose) for one day, which means that in the third week

the total administration of Fe tablets was 21 tablets with a total dose of 5250 mg, there was an increase in the average hemoglobin level. adolescent blood to 11.67 g/dl. The lowest Hb level was 11.4 g/dl and the highest was 13.2 g/dl. The average increase in Hb reached 1.29 g/dl. After the intervention, the Hb levels of adolescent girls exceeded the normal limit up to 12 g/dl, which means that in the third week there were several adolescents who did not experience anemia.

The results of statistical tests using the Wilcoxon Sign Rank Test obtained a p value of 0.000, so that there is an effect of giving Blood Supplemental Tablets (Fe) to increase hemoglobin levels in the third week with a dose of 250 mg (1 tablet dose) for one day in Young Women in Mining Areas Morosi District. According to the researcher's assumption, the more Fe tablets consumed, the higher the blood hemoglobin level in adolescent girls. Therefore, giving blood-added tablets has an effect on increasing blood hemoglobin levels, which has a positive effect because it can increase Hb in adolescents in the Morosi mining area.

This study is in line with research conducted by Noky (2014) on the effectiveness of giving Fe tablets to the Hb levels of State junior high school Donorojo students, Donorojo District, Pacitan Regency, which stated that respondents who had taken Fe tablets for 1 month regularly obtained significant results. This is indicated by an increase in the percentage of the number of State junior high school Donorojo students after being given Fe tablets. The results showed that those suffering from mild anemia decreased from 102 students (64.56%) to 70 students (44.30%) and those who did not suffer from anemia experienced an increase. from 56 students (35.44%) to 88 students (55.70%).^[15]

This research is supported by the theory which states that normal hemoglobin levels in the blood usually depend on gender, age, and general health. Low or high hemoglobin levels can indicate various health conditions, including anemia and sickle cell disease. Blood Add Tablets are sugar-coated tablets containing iron and folic acid. Iron is important in the formation of hemoglobin in the body so that it can help overcome anemia during menstruation, pregnancy, lactation, during growth, and after bleeding. Folic

acid is used to reduce megaloblastic anemia during pregnancy and growth.^{[8],[16]}

This research is confirmed by the rules in the Indonesian Ministry of Health, (2016) that when consuming blood-added tablets it is not allowed to eat or drink containing alcohol, tea. Coffee or fruits that contain alcohol such as durian, tape, pineapple, mango because it can reduce the absorption of iron in the body so that its benefits are reduced. To reduce symptoms of nausea and vomiting, it is the right time to take Fe tablets after dinner or before bed.

The Effect of Giving Blood Supplement Tablets (Fe) on the Increase in Hemoglobin Levels in the Fourth Week

This study showed that from 72 samples, the average (mean) blood hemoglobin level in the fourth week before being given blood-added tablets (Fe) was 11.38 g/dl, with the lowest Hb level being 9 g/dl and the highest being 11.4 g/dl, then after being given tablets added blood (Fe) with a dose of 250 mg (1 tablet dose) for one day, which means that in the fourth week the total Fe tablets consumed were 28 grains with a dose of 7,000 mg and showed an increase in hemoglobin levels. adolescent blood becomes 12.86 g/dl, with the lowest Hb level is 11.6 g/dl and the highest is 14.6 g/dl. The average increase in Hb reached 2.48 g/dl. This means that in the fourth week the Hb level in all adolescents has reached and exceeded the Hb standard in women and all adolescents do not have anemia.

The results of statistical tests using the Wilcoxon Sign Rank Test obtained a p value of 0.000, so it was concluded that there was an effect of giving blood-supplementing tablets (Fe) to increase hemoglobin levels in the fourth week with a dose of 250 mg (1 tablet dose) for one day in adolescent girls in Morosi District Mining Area. This study is in line with the research of Tonasih, et al., (2019) which found that there was an effect of giving blood-added tablets to adolescents on an increase in hemoglobin, namely the average Hb level before the intervention was 12.7 g/dl and increased after being given blood-added tablets. with an average of 12.9 g/dl^[17], as well as research by Nuraeni, et al., (2019), found that after being given TTD, those who had mild anemia experienced a decrease from 42% to 22.6%, who suffered from anemia. is experiencing a decline

from 58% to 42%. Meanwhile, adolescent girls who were not anemic experienced an increase to 35.4%.^[18]

The results of this study concluded that there was an effect of giving iron tablets to increase hemoglobin levels in adolescents with anemia. Similarly, research by Nuraeni, et al., (2019) found that there was an effect of giving Fe tablets to increase hemoglobin levels in adolescents with anemia, namely 1.01 g/dl. This study is reinforced by the theory put forward by Proverawati&Asfuah, (2011) that normal hemoglobin levels in adult women: 12.1 g/dl to 15.1 g/dl. Iron has many special functions in the body. More than 65 percent of the body's iron is in the blood in the form of hemoglobin, which is a protein in red blood cells that transports oxygen to tissues in the body. In addition, iron has a role in many chemical reactions in the body that produce energy. The human body can store excess iron as a reserve. The World Health Organization reports that iron deficiency anemia is one of the most widespread nutritional deficiencies in the world. Various factors can affect its absorption such as low iron intake, insufficient iron absorption, or too much blood loss.^[19]

Conclusion

There was no effect of giving Blood Supplementary Tablets (Fe) on the increase in hemoglobin levels in the first week with a dose of 250 mg (1 tablet dose) for one day in Young Women (p value 1,000). There is an effect of giving Blood Supplement Tablets (Fe) on the increase in hemoglobin levels in the second week of Adolescent Girls (p value 0.000). There is an effect of giving Blood Add Tablet (Fe) on the increase in hemoglobin levels in the third week (p value 0.000). There is an effect of giving Blood Add Tablet (Fe) on the increase in hemoglobin levels in the fourth week (p value 0.000).

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