

EVALUATION OF ADMINISTRATION AND FACTORS AFFECT IN OBSTETRIC PATIENT ADHERENCE TO IRON SUPPLEMENTATION AT REGIONAL PUBLIC SERVICE AGENCY ALOE SABOE GENERAL HOSPITAL

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ABSTRACT

During pregnancy, iron is important in compensating for the increase blood volume, often with growth and development of the fetus. Pregnant woman should consume sufficiently and balance food then take iron supplements to meet their increase iron needs. Lack of iron supplementation during pregnancy can cause anemia, anemia in pregnant women will cause interference with the distribution of oxygen from nutritional sources to the placenta and the fetus, this is what can cause disruption of fetal growth and development that causes an increase in Low Birth Weight, prolonged labor, abortion, asphyxia neonartum even maternal death and fetus. various iron supplements are circulating in the market but WHO has a minimum standard, therefore evaluating iron tablet is needed, especially in health care facilities as well as factors that influence patient compliance in consuming these tablets.

This research is an observational descriptive study by measuring independent variables consisting administration of iron tablets, knowledge, education, family support, support from health workers and compliance with consumption iron tablets in pregnant woman. The number of samples used were all patients who visited the Obstetric section of the Aloe Saboe Hospital during Agustus to Oktober 2018. Data analysis was performed descriptively.

The results showed that administration of Fe tablets provided by the hospital was in accordance with the WHO minimum standard of 1 tablet per day (Ferrous Fumarat content of 180 mg is equivalent to Fe Element 60 mg and patien knowledge, education, family with health workers support affect the patient's adherence with routine iron tablets consumption.

Keywords: Adherence, Administration, Iron Supplementation, Evaluation

INTRODUCTION

Iron Deficiency Anemia (IDA) is known by the lack of red blood cell counts and tends to be paler than the initial color (microcytic and hypochromic), this is consistent with reduced iron storage and manifests a decrease in serum Ferritin to below 12 mcg / L (CADTH), 2016).

Data from the 2012 WHO prevalence of anemia in pregnancy globally reached 32.8%.and is estimated to increase 48.1%. While data from the Basic Health Research (Riskesdas) in 2013 the prevalence of anemia in pregnant women in Indonesia reached 37.1%.

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Anemia condition in pregnant women will cause disruption of oxygen delivery from nutritional sources to the placenta and the fetus, disorders of fetal growth and development so that there is an increase in LBW (Low Birth Weight), the risk of prolonged labor, abortion, asphyxia neonartum, puerperal sepsis and bleeding that triggers 80 % of maternal and fetal deaths [3][5][7].

Giving Iron tablets can prevent and overcome anemia due to iron deficiency and or folic acid. For women of childbearing age, it is given 1 (one) time a week and 1 (one) time a day during menstruation and for pregnant women given every day during pregnancy or at least 90 (ninety) tablets, but the elemental composition of iron and folic acid Iron tablets are given must be in accordance with WHO minimum standards so that it can be a reference for local governments in providing Iron tablets [10]

The composition of Iron tablets that are in accordance with the standards must always be consumed routinely, therefore compliance is required from pregnant women to prevent anemia. The results of siamintarsih research in 2000 showed that 80% of respondents had the ability to consume Fe tablets as recommended by the Ministry of Health, 56.6% of respondents had an unsuccessful education. 70% of respondents have good knowledge. 66.6% of respondents get motivation from family. 86.6% of respondents get motivation from health workers. This is consistent with research in several other health services that shows there is a relationship between respondents' knowledge and motivation from relatives and health workers to increase compliance [8][9].

The data obtained by Riskesdas By comparing the distribution of iron tablets in Riskesdas 2010 and 2013 with the number of mothers consuming iron tablets ranged from 90 (ninety) days to only

33.3%. Besides that, based on Indonesia's health profile in 2017 anemia still occurs in 37.1% of pregnant women, due to these conditions it is important to evaluate the oral iron supplementation of pregnant women and the factors that influence the compliance of pregnant women in consuming iron tablets in one of the service health locations in this case at the Aloe Saboe Public Hospital Gorontalo City.

LITERATURE REVIEW

A. Anemia

Pregnancy requires additional iron to increase the number of fetal and placental red blood cells. The more often a woman experiences pregnancy and childbirth, the more iron loss will become anemia [5].

Iron is one of the constituent components of hemoglobin. If the body lacks iron (iron deficiency), it will inhibit the formation of hemoglobin which results in inhibition of red blood cell formation. Furthermore, anemia arises due to iron deficiency called iron deficiency anemia [14].

Symptoms of people who have iron deficiency anemia [14]:

- a. Tired, weak, pale and less passionate
- b. Headache and irritability
- c. Unable to concentrate and susceptible to infection
- d. Chronic anemia the shape of the nail is spoony and brittle, cracked at the corners of the mouth, soft tongue and difficult to swallow.

Anemia is actually a decrease in the capacity of oxygen transport from the blood usually to a normal physiological state. This does not occur during pregnancy where oxygen-carrying capacity is higher than in nonpregnant women.

B. Compliance

The definition of compliance in consuming iron tablets is the observance of pregnant women implementing the advice of health workers to consume iron

tablets. Compliance according to Sackett in patients as "The extent to which individual behavior in accordance with the provisions provided by health professionals" [1].

There are several factors that support patient compliance in treatment, namely: (1) knowledge obtained by the patient, for example reading books, listening to tapes about health; (2) understanding the patient's personality, giving rise to empathy in the patient's feelings; (3) social support from family or friends; (4) maintenance is made simple; and (5) increasing professional interaction between patients and health care workers [6].

Compliance with consuming iron tablets is measured by the accuracy of the number of tablets consumed, accuracy of how to consume iron tablets, frequency of consumption daily. Iron supplementation or administration of iron tablets is one of the important efforts in preventing and treating anemia, especially iron deficiency anemia. Iron supplementation is an effective way because the iron content is supplemented with folic acid which can also prevent anemia due to folic acid deficiency [1].

Monitoring compliance with Fe tablet consumption can be measured in way [4]:

- (1) The occurrence of black discoloration in the stool indicates that the target is taking Fe tablets. The presence of Fe in the stool can also be identified by the Afifi test;
- (2) Look at the packaging of Fe tablets, to monitor the amount of Fe tablets consumed;
- (3) Supervision and monitoring to see whether Fe tablets are actually consumed by pregnant women;
- (4) Seeing the development of the health of pregnant women whether the target is consuming Fe tablets.

C. Iron Supplementation

Overcoming the problem of iron deficiency anemia in pregnant women, the

government through the Ministry of Health of the Republic of Indonesia has since 1970 through the Family Nutrition Improvement Program distributing iron tablets [4]. This is an efficient way to prevent and treat iron deficiency anemia in pregnant women because the iron content is solid and is supplemented with folic acid. In addition, iron tablets are given by health workers free of charge so that they are accessible to the wider community and easily available [4].

Requirement for Iron and Folic Acid Supplementation in Pregnant Women Every Day [10].

Table 1. Need for Fe and Folic Acid Supplementation in Pregnant Women Every Day

Composition	Iron: 30-60 mg of Fe Elemental Folic acid : 400 µg (0,4 mg)
Frequency pemberian	Once a day
Duration of administration	In pregnancy, iron and folic acid supplementation should be started as soon as possible.

*30 mg of iron from iron elemental is equivalent to 150 mg of ferrous sulfate heptahydrate, 90 mg of ferrous fumarate or 250 mg of ferrous gluconate [15].

Blood added tablet standards are intended to provide a reference for the Government with the aim of ensuring the availability of quality added blood tablets and meeting the standards in order to prevent and overcome the occurrence of iron nutrition anemia in women of childbearing age with priority in pregnant women [10].

According to the Indonesian Ministry of Health (1999), iron tablets are given to pregnant women according to the dosage and method specified, namely:

- a. Preventive dose, given to the target group without Hb examination, which is 1 tablet daily (60 mg of elemental iron and 0.25 mg of folic acid) respectively for at least 90 days of pregnancy starting from the first time a pregnant woman checks her pregnancy (K1).

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b. The dosage of treatment, given on target (Hb from the threshold) is when the Hb level of 11 gris given to 3 tablets a day for 90 days of pregnancy.

RESEARCH METHODS

This research was an observational descriptive study using a cross sectional design by measuring independent variables consisting of iron tablets, knowledge, education, family support, support from health workers and the dependent variable, namely compliance with consumption of pregnant women iron tablets. And using in-depth interviews on variables giving iron tablets.

This research was carried out in Outpatient Poly, VK room and Obstetrics and Gynecology inpatient rooms at the Aloe Saboe General Hospital Gorontalo in August - October 2019.

Data collection technique is to use the question guide on the questionnaire distributed to obtain data on dosage, frequency of taking Fe tablets, duration of administration, knowledge, family support and health workers. The data obtained is then processed data by coding patient data and data entry into the data processing program.

RESULTS AND DISCUSSIONS

The highest number of pregnant women respondents in the second trimester was 58%. The characteristics of respondents in the age range of 20-30 years is 75.6%, above 35 years is 5%. Based on the type of work 85% is House wife , and the highest education level of high school respondents is 35%.

a. Knowledge of Anemia and Iron Tablets

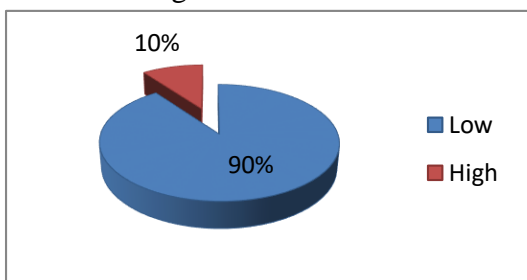


Figure 1 Distribution of respondents based on their knowledge of anemia and iron tablets

b. Question of respondents' knowledge

The knowledge questions that were most answered correctly were 50% related to the color of the tablets added to the blood consumed, while the question of knowledge was answered incorrectly by respondents about the dose of iron that must be consumed by pregnant women per day and indications of tablet administration.

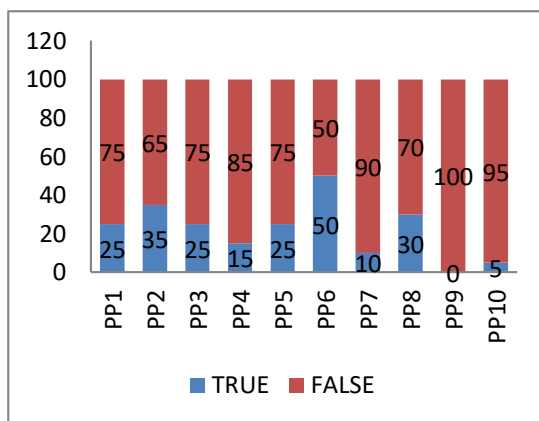


Figure 2 Distribution of respondents based on right and wrong answers to knowledge questions (PP)

c. Family support for respondents during pregnancy

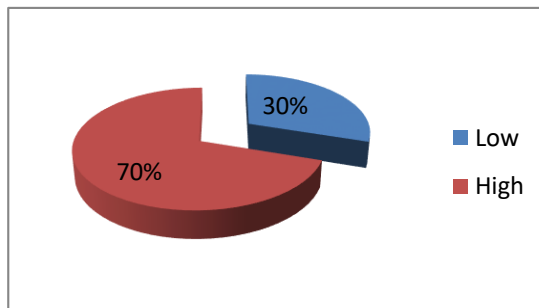


Figure 3 Distribution of respondents based on right and wrong answers to knowledge questions (PP)

d. Health Care Support for respondents During Pregnancy

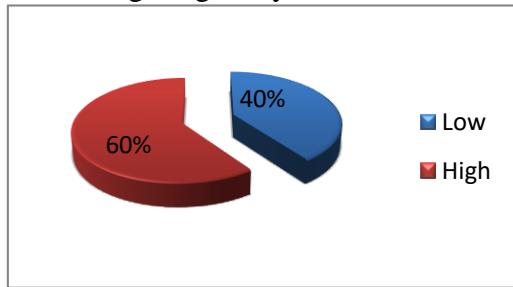


Figure 4 Distribution of Respondents based on their Knowledge of Anemia and Iron Tablets

e. Consumption of respondent's iron tablets during pregnancy

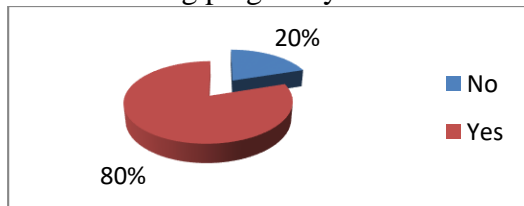


Figure 5 Distribution of Respondents based on their Knowledge of Anemia and Iron Tablets

Fe tablets available at Aloe Saboe General Hospital are blood-added tablets (Fe Fumaric and Folic Acid) and other brands of Fe tablets with the composition of Fe fumarate, As. Folate, vitamins B12, C, D, Calcium Carbonate). Drug stock vacancies can occur at Aloe Saboe Hospital, but this can be overcome by prescribing the complementary pharmacies.

Provision of Fe tablets to respondents in the hospital is in accordance with ministry of health policy number 88 in 2014, namely the composition of each tablet plus blood Iron is equivalent to 60 mg of elemental iron (in the form of Ferro Sulfate, Ferro Fumarat or Ferro Gluconate preparations); and Folic Acid 0,400 mg. The frequency of administration to pregnant women and post partum in normal conditions is enough 1 x 1 tablet per day while in pregnant women with anemia taken 2 times 1 tablet / day for 16

weeks and 3 months post partum until Hb returns to normal (WHO, 2012).

f. Compliance of Respondents Taking Iron Tablets

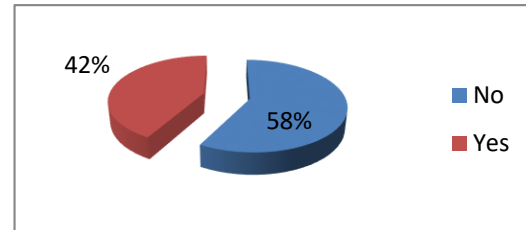
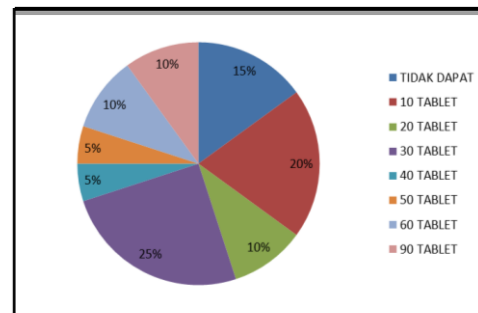


Figure 6 Distribution of Respondents based on iron consumption compliance

Based on how to drink iron tablets, the results of data processing showed that only 35% of respondents knew how to drink iron tablets.

Respondents gave several reasons for non-compliance namely forgetfulness, laziness, the side effects of consuming iron tablets in the form of drowsiness, headaches and nausea. The NHS guidelines state that Gastrointestinal toxicity occurs in about 35% - 49% of patients taking Fe tablets, which causes discomfort when taking these tablets, therefore the solution can be accompanied by food or with reduced doses. Due to the drowsiness felt by the patient after taking Fe tablets, Fe tablets should be taken at night. Another reason is that respondents who think that iron tablets are a drug also consider that taking iron tablets makes their blood pressure high.

g. The number of Fe tablets given health services



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Figure 7 Distribution of respondents based on the number of iron tablets obtained

Based on the diagram above, respondents who received blood-added tablets according to the government program were 90 tablets for 3 months (1 tablet per day) at only 10%, this is because Aloe Saboe Hospital is the second health care facility so that pregnant women who has entered to the Hospital and check-up poly blood supplemented tablets are only given as indicated if the measurement results show the patient's Hemoglobin is below normal limits or from the Obgyn doctor's history.

CONCLUSION

Based on the results of an evaluation study of the evaluation of oral iron supplementation in obsetry patients in aloe saboe general hospital inGorontalo, it can be concluded:

1. Supplementation of Iron tablets in Aloe Saboe general Hospital has adequate availability by giving 1 tablet daily for pregnant women and after giving birth (Fe fumarate 60 mg + As. Folate 0.4 mg), and for pregnant women diagnosed with anemia and post partum given 2 x 1 (Fe Fumarat 120 mg + As. Folate 0.4 mg)
2. The factors that influence compliance to tablet consumption include maternal knowledge, maternal education, family support and health workers.

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