PREVENTION OF ANEMIA IN PREGNANT WOMEN THROUGH GIVING CATFISH CRACKERS AND MORINGA LEAVES

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ABSTRACT
The high risk of morbidity and mortality in mother and baby can be caused by anemia. Pregnant women are vulnerable to nutritional problems and other diseases, including infection with the Covid-19 virus. One of the preventive measures is to consume nutritious foods such as food sources of antioxidants. Giving Crackers Catfish and Moringa Leaves is expected to overcome the incidence of anemia in pregnant women. The purpose of this study was to determine the prevention of anemia in pregnant women through the provision of catfish crackers and Moringa leaves. This research will use quantitative research with a pre-experimental design. This research was conducted in the Kedanyang Sub-Puskesmas area in 2022. The research subjects were pregnant women with anemia at the Kedanyang Sub-Puskesmas (Hb<11 g/dl) (n=27), obtained by simple random sampling. The expected outcome is to prevent the incidence of anemia in pregnant women and to publish the proceedings of an international.

Keywords: anemia, pregnant women, catfish crackers and moringa leaves

INTRODUCTION
Anemia is a condition in which the body has levels of red blood cells (erythrocytes) that are less than normal and can happen to anyone, but pregnant women are among the most susceptible to experiencing it. All pregnant women are at risk for anemia. Anemia is caused by the body not being able to meet the needs of the blood supply, iron, and folic acid which is more than usual during pregnancy. Red blood cells contain hemoglobin which functions to carry oxygen to all body tissues. If the number of red blood cells in the body is too small, the mother and fetus can be deprived of nutrients and oxygen which will endanger the safety of the mother and fetus. More than half of the world's population who experience anemia occurs in children who have not been to school and pregnant women. Based on the 2018 Riskesdas data, it shows that the prevalence of pregnant women who experience nutritional problems in the form of anemia is still high at 48.9% (Riskesdas, 2018). The prevalence in 2013 was 37.1% (Kemenkes RI 2013, 2018). This indicates an increase in the incidence of pregnant women experiencing anemia. Several studies state that anemia in pregnancy is an indirect cause of maternal mortality in developing countries by 23.0%. Heavy bleeding during childbirth can cause complications in pregnant women with anemia.

One of the government programs in overcoming anemia in pregnant women is to provide iron and folic acid supplementation. Apart from that, many other programs have also been carried out, such as improving maternal and child health as well as improvement programs nutrition. One way that can be done from improving nutrition is preventive activities by maintaining proper food intake. In general, all pregnant women will receive Fe tablets and must be consumed during pregnancy from the age of 3 months (trimester 1) to the
age of 9 months (trimester 3). In addition to consuming foods that are high in iron, antioxidants are currently widely studied related to the incidence of anemia in pregnant women. The high incidence of increased metabolism in pregnant women causes high levels of free radical compounds formed. Therefore, pregnant women need high antioxidants (Nadimin 2018). Moringa leaves are one of the types of trees for food sources that thrive in Indonesia, including Gresik Regency. The results showed that the calcium content of Moringa (Moringa oleifera) leaves was 497.8 mg/100 grams and the iron content was 6.24 mg/100 grams (Fatmah Dhafir, 2020). Consuming Moringa leaves by making vegetables has become a habit of the community, especially rural communities. Fish is a source of animal protein with a higher digestibility value than other animal proteins. One source of protein from fish is catfish. In this study, catfish was chosen as animal protein because the composition of nutrients in catfish includes protein (17.7%), fat (4.8%), minerals (1.2%), and water (76%) (Astawan, 2008). In addition, catfish is one of the most easily accepted fish by the community because it is easily found in traditional markets because the potential for catfish production is quite large, especially for freshwater fisheries.

RESEARCH METHOD
This research will use quantitative research with a pre-experimental design. This research was carried out in the area of the Kedanyang Public Health Center in 2022. Furthermore, this research was carried out using a pre-post-test design in one group or a one-group pre-posttest design, namely by means that the group will be observed first before being treated, then the group will be observed again after being given treatment. The subjects of the study were pregnant women who experienced anemia at the Kedanyang Public Health Center (Hb<11 g/dl) (n= 27), obtained by simple random sampling. Research subjects were given treatment in the form of giving Catfish Crackers and Moringa Leaves (30 g) with a frequency of 1 time every day for 2 weeks in a row. Hb measurements were carried out before and after treatment using peripheral Hb examination with the Easy Touch tool.

The expected outcome is to prevent the incidence of anemia in pregnant women and to publish the proceedings of an international.

RESULT AND DISCUSSION
This study of data on anemia in pregnant women was carried out by taking data on visits by pregnant women at the Amanda Kedanyang Clinic during August 2021 to April 2022. The data obtained showed that the number of visits by pregnant women was 23 visits. The data obtained showed that there were 8 pregnant women who experienced anemia (Hb less than 11 grams %) with 4 people in the first trimester (11.5%), 1 person in the second trimester (2.8%) and 3 people in the third trimester (8.6%).

Judging from the number of each trimester, the number of pregnant women with anemia is highest in the first trimester. The incidence of anemia in pregnant women is mostly experienced, especially in the second trimester of pregnancy as a result of hemodilution or blood thinning during the second trimester of pregnancy. However, the data collected showed that the incidence of anemia was most common in first trimester pregnant women. In fact, the data collected were pregnant women with Hb less than 11 gram% regardless of the gestational age in the trimester. Actually the criteria for anemia in pregnant women in the second trimester is if the Hb level is less than 10.5 gram%. So the number of pregnant women with anemia in the second trimester should be the highest when compared to the first and third trimesters. This could be due to the fact that not all pregnant women who visit Amanda
Kedanyang Clinic have their hemoglobin levels checked, especially during the second trimester of pregnancy, because there is a possibility that their Hb levels are low.

According to data from the Indonesian Ministry of Health in 2018, the number of pregnant women with anemia was 48.9%. There were 23 pregnant women who experienced anemia during their visit to Amanda Kedanyang Clinic (0.34%). This may happen because not all pregnant women who visit are checked for hemoglobin levels, so there is a possibility that pregnant women with anemia will not be detected. This could be due to the awareness of pregnant women to consume snacks such as Crackers Catfish and Moringa leaves or vitamins that can increase Hb levels are already high. Possibly also because it is supported by the high knowledge of mothers about the dangers of anemia so that there are efforts to avoid it so that anemia does not occur. For example, not consuming excessive tea and coffee which can inhibit the absorption of iron in the body, cultivating PHBS behavior, especially washing hands with soap after activities and before eating to prevent contracting the danger of hookworms which can cause anemia or anemia in pregnancy.

Based on research that has been done that catfish crackers and Moringa leaves to prevent anemia were developed in the form of 10g Moringa leaf flour and the addition of 30g catfish and 30g margarine to get crispy crackers and high nutritional value. Crackers contain high nutrients, namely protein, fiber, fat, carbohydrates, iron, calcium and sodium. Crackers can be used as a snack source of antioxidants for pregnant women.

CONCLUSION
This study took data from the visit of pregnant women at the Amanda Kedanyang Clinic in August 2021 to April 2022. The data studied were pregnant women with Hb less than 11 grams % regardless of the gestational age of the visiting pregnant women.

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