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# Causes Of Low Hemoglobin Levels In Pregnancy

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## ABSTRACT

Low levels of hemoglobin in pregnancy have become a major health problem today as it affects nearly half of the population of pregnant women worldwide. Anemia in pregnant women is caused by several causes, namely iron deficiency and compliance with Fe consumption during pregnancy is not routine. Efforts used to reduce the rate of anemia in pregnant women are by giving iron supplements during pregnancy. Health workers need to provide health education about the importance of nutrition for pregnant women to prevent anemia during pregnancy. The aim is to determine the causes of the incidence of low hemoglobin in pregnancy. This type of study is literature (Literature review). The literature sources used are journals from Pubmed, Research Gate and Google Scholar. The causes of low hemoglobin incidence were adherence to drinking iron tablets, ANC, age, and parity, protein and vitamin C, knowledge, attitudes and behavior in consuming iron / Fe tablets. Adequate intake of iron or iron, protein, vitamin C is essential for a healthy pregnancy. It is necessary to pay attention to age, parity, knowledge, attitudes, consumption behavior during pregnancy fe.

**Keywords:** Hospital, Outpatient, Patient, Registration, and Satisfaction.

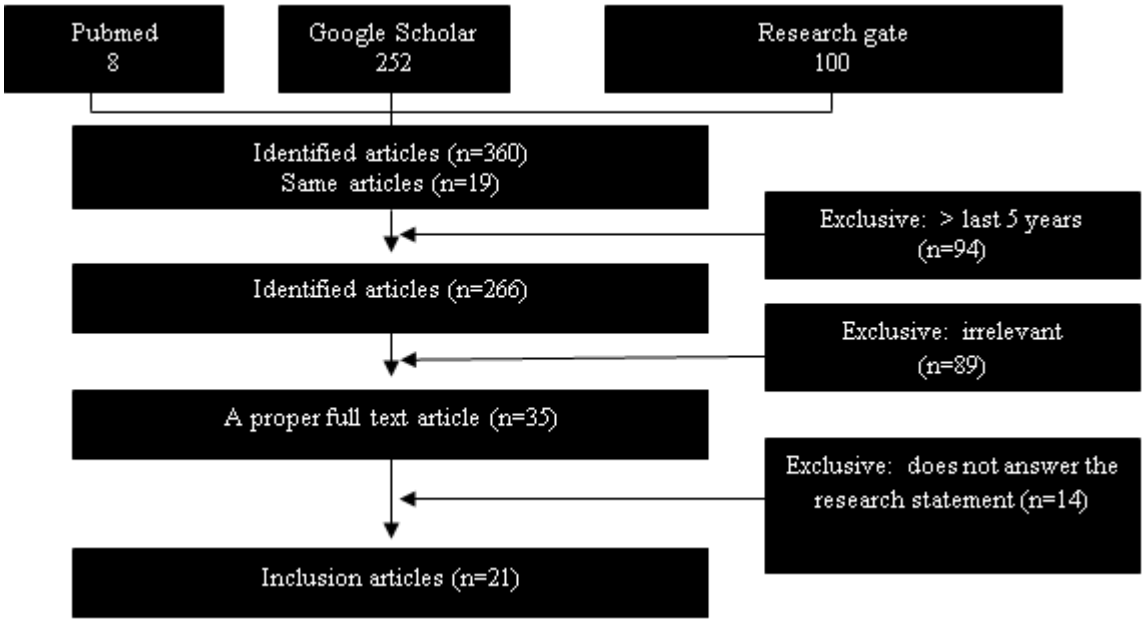
## INTRODUCTION

Low hemoglobin levels in developing countries, reaching a global epidemic state. Iron deficiency during pregnancy is one of the main causes. Many women go through the entire pregnancy without achieving the minimum required iron intake. An extensive literature review reveals that iron deficiency is a global nutritional problem affecting up to 52% of pregnant women. A hemoglobin level of less than 11 g/dL at any time during pregnancy is considered abnormal. Once anemia is identified, the possibility of iron deficiency must be considered. Abnormality in the red cell index on the complete blood count usually precedes the development of a lower hemoglobin level. Iron deficiency usually develops slowly over time, and may be asymptomatic, or clinically clear. After the iron stores were completely depleted,

The aim of this study is to review some literature on the problem of low hemoglobin in pregnancy is currently a major global health problem because it affects almost half of all pregnant women worldwide. Low hemoglobin in pregnant women is caused by iron deficiency. Efforts to reduce the anemia rate of pregnant women are by providing iron supplements as much as 90 tablets and fulfilling nutritional intake during pregnancy. The aim of this literature review is to determine the causes of the incidence of low hemoglobin in pregnant women.

## METHODS

Search results through 3 electronic search engines namely Pubmed, Google Scholar, and Research Gate found 360 articles. After the screening process was carried out based on the established inclusion criteria, 35 articles were reviewed. The results of the review of articles that have been conducted found that at most (21).




## RESULTS AND DISCUSSIONS

The results of the literature review after searching for information from various articles related to the topic used three database sources, namely Pubmed, Research Gate and Google Scholar. The study was conducted in the period 2015 to 2020. A total of 21 research articles on the causes of low hemoglobin incidence of pregnant women in developing countries were reviewed, and articles related to routine or irregular use of supplements.

The results of the review show that the effectiveness of the iron supplement program needs to be adjusted to the target of pregnant women. An integrated intervention program with increased food consumption and adherence to drinking iron tablets provides a more optimal impact to prevent low hemoglobin.

The results obtained from the article are as follows:

1) the research was conducted on the target group of pregnant women;

2) Concentration on the problem of causes of low hemoglobin which is found that most affects low hemoglobin is compliance with consumption of fe, ANC, age, and parity, protein, and vitamin C, knowledge, attitudes and behavior of consuming iron / Fe tablets.

3) the intervention program discussed in the article has been completed in relation to it

with consumption of iron

4) the research was conducted in the period 2015 to 2020

While the discussion of interventions is related to low hemoglobin due to genetic factors, economic aspects, education, knowledge, but this has less effect on low hemoglobin.

In terms of the type of cause, it is estimated that at least fifty percent of the incidence of anemia is related to iron deficiency anemia. WHO has recommended giving iron tablets to reduce the risk of low hemoglobin in pregnant women. Systematic review Further, a more in-depth study of the implementation of the recommendations is needed. This is because the implementation of a program is influenced by other factors that reduce its effectiveness. One of them is related to the compliance of pregnant women to consume the tablets given which causes the implementation of the supplementation program to be less optimal. The main focus of the study is the causes of low hemoglobin incidence in pregnant women.

In accordance with the 2017 Sinthu Sivanganam states that the results of the study found that 18 people (36%) out of 50 pregnant women in the village area of Sidemen Karangasem were categorized as obedient in consuming iron tablets, while 32 people (64%) were categorized as non-compliant. The results showed that most of the pregnant women did not adhere to consuming Fe tablets allowing low hemoglobin. The cause is due to the lack of health promotion about Fe tablets provided by health workers. In accordance with Sophia Sarah, 2018 states that pregnant women with low hemoglobin and have a low level of adherence to consumption of Fe tablets (43.3%) are more than those with high levels of adherence to consumption of Fe tablets (6.7%). The results of the Chi Square statistical test obtained p = 0.001. There is an effect of the level of compliance of pregnant women trimester III in consuming Fe tablets on the incidence of anemia at Pejeruk Health Center. In accordance with Ratna Wulandari, 2018 based on a case control quantitative research design. Purposive Sample of pregnant women in the third trimester at the Puskesmas, Pasar Minggu District, 47 respondents. The results of univariate analysis of 61.7% of mothers obeyed the consumption of Fe tablets and 31.9% low hemoglobin, bivariate analysis of the Pearson correlation test of compliance of respondents with Fe tablet consumption with Hb levels resulted in p (value) = 0.756 and the regression test of R-square results was 0.572. So the compliance of pregnant women in consuming Fe tablets was significantly related to Hb levels with the proportion of the effect was 57.2%.

According to the research of Veny Nurmasari (2019) ANC irregularity problems and non-compliance of pregnant women consuming Fe tablets. Using a case control study design with a sample size of 30 consisting of 15 cases and 15 controls taken by simple random sampling method. This study linked regular Antenatal Care (ANC) visits and compliance with Fe tablets consumption with the incidence of anemia in third trimester pregnant women. The research was conducted in the working area of the Maron Community Health Center, Probolinggo Regency. The data analysis used was chi-square. The results showed that there was a relationship between regular Antenatal Care (ANC) visits (p = 0.001; OR = 4) and compliance with Fe tablet consumption (p = 0.001; OR = 3.46) with the incidence of anemia. Pregnant women who did not regularly make ANC visits had a 4 times greater risk of developing anemia, while pregnant women who did not comply with Fe tablets had a 3.46 times greater risk of developing anemia.

Pregnancy is a problem that triggers low hemoglobin. When suffering, the blood does not have enough healthy erythrocytes to carry oxygen to the body's tissues and the baby. During pregnancy, the body produces 50% more blood to support the baby's growth. If you don't get enough iron, your body can't produce the number of erythrocytes it needs to make this extra blood. Experiencing more severe consequences of low levels of iron, vitamins or nutrient intake, can make you feel tired and weak. If it is severe but not treated it can increase the risk of serious complications such as preterm birth.

## CONCLUSION

Based on the analysis by the author of several journals relevant to the author's research, it can be concluded that adequate intake of iron or Fe, protein, vitamin C is very important for a healthy pregnancy. It is necessary to pay attention to age, parity, knowledge, attitudes, consumption behavior during pregnancy fe.

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