



The Administration of Iron Supplements for Anemia Prevention in Pregnant Women: Scoping Review

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ABSTRACT

Background: Bleeding after childbirth is the primary cause of death as a result of anemia. Typically, anemia occurs due to iron deficiency. Consequently, it is necessary to consume iron to prevent anemia. The administration of iron and folic acid supplementations effectively increases hemoglobin levels, and it is essential to conduct an anemia prevention articles review. **Objective:** To analyze the administration of iron supplements for anemia prevention in pregnant women. **Method:** Scoping review with the PRISMA-ScR framework using relevant databases, including Pubmed, ProQuest, and Ebsco. Critical Appraisal was conducted with Joanna Briggs Institute (JBI) tools. **Results:** The search results obtained 352 articles, with the final result of ten articles that fulfilled the inclusion and exclusion criteria. Six articles were from developed countries, and four articles were from developing countries, which were obtained in different ways: the quasi-experimental (two articles), Randomized Controlled Trial (six articles), Cohort (one article), and Cross-sectional (one article). There were two themes related to the articles found: the effectiveness and impact of consuming Fe supplements.

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Kata kunci:

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ABSTRAK

Latar Belakang : Perdarahan dalam persalinan merupakan penyebab kematian nomor 1, perdarahan disebabkan oleh anemia. Umumnya anemia terjadi karena kekurangan zat besi sehingga perlunya konsumsi zat besi untuk mencegah anemia. Pemberian suplementasi zat besi dan asam folat efektif meningkatkan kadar hemoglobin oleh karena itu penting dilakukan *review* artikel untuk pencegahan anemia. **Tujuan :** Menganalisis pemberian tablet zat besi untuk pencegahan anemia pada ibu hamil. **Metode :** *Scoping review* ini menggunakan *framework* PRISMA-ScR menggunakan *database* yang relevan diantaranya *Pubmed, ProQuest, dan Ebsco. Critical Appraisal* menggunakan tools *Joanna Briggs Institute* (JBI). **Hasil :** Berdasarkan hasil dari pencarian didapatkan 352 artikel jurnal dengan hasil akhir 10 artikel yang sesuai dengan kriteria inklusi dan eksklusi. Artikel tersebut berasal dari negara maju 6 artikel dan 4 artikel dari negara berkembang. Menggunakan metode Quasi eksperimen 2 artikel, 6 artikel Randomize Controlled Trial, 1 artikel Cohort, dan artikel Crossectional. Didapatkan dua tema terkait artikel yang didapatkan yaitu efektivitas dan dampak dari konsumsi tablet Fe. **Kesimpulan:** Suplementasi zat besi pada ibu hamil efektif meningkatkan konsentrasi hemoglobin (HB) yang dapat berpengaruh terhadap kesehatan ibu dan janin. Konsumsi suplementasi zat besi menimbulkan efek samping seperti rasa tidak nyaman di ulu hati, diare, sembelit, mual dan muntah. Efek samping tersebut yang membuat ibu hamil tidak patuh dalam konsumsi zat besi. Selama konsumsi suplementasi perlu diimbangi dengan makanan atau minuman yang tidak mempengaruhi penyerapan besi, hindari minuman seperti teh dan kopi.

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INTRODUCTION

Anemia is one of the primary health problems encountered in developed and developing countries (Appiah et al., 2020). The World Health Organization (WHO) defines anemia as a condition in which the hemoglobin (Hb) level is below average or less than 11gr/dl (WHO, 2011), which can interfere with the capacity of the blood to carry oxygen throughout the body (Astapani, Harahap Anggriani, 2020). Based on the Riskesdas in 2018, the prevalence of anemia in pregnant women in Indonesia was 48.9%; in other words, five out of ten pregnant women approximately suffered from anemia (Kementerian Kesehatan Republik Indonesia, 2020).

Bleeding after childbirth is the primary cause of death as a result of anemia (Astapani, Harahap Anggriani, 2020). Generally, anemia occurs due to iron deficiency (Gayathri et al., 2021). Anemia in pregnancy affects the mother and fetus. It can lead to shock, prolonged labor, uterine anthonia, uterine inertia (Astapani, Harahap Anggriani, 2020), premature labor, premature rupture of membranes, and embolism (Abujilban et al., 2019). At the same time, the consequences that occur in the fetus are prematurity, low baby weight, low APGAR score, failure to thrive, lack of cognitive development (Abujilban et al., 2019), and congenital malformations (Astapani, Harahap Anggriani, 2020).

Regarding the government's efforts to overcome the prevalence of anemia, The Ministry of Health created a program to distribute iron supplements through puskesmas (community health centers) and posyandu (postnatal health care) (Kementerian Kesehatan Republik Indonesia, 2020). Thus, it is necessary to consume iron for anemia prevention in pregnant women. For pregnant women, compliance with iron supplements effectively increases hemoglobin levels (Wanjira et al., 2020). Research from (Keswara & Hastuti, 2017) reported that iron and folic acid supplementation in pregnant women affected the increased hemoglobin. Based on the description above, it is necessary to review articles to analyze the administration of iron supplements for anemia prevention in pregnant women.

The questions for this scoping review are based on the PEOs framework: population of pregnant women, exposure

to anemia prevention with iron consumption, the outcome of hemoglobin (HB) levels, and study type of all articles that discuss the consumption of iron supplements. Based on the PEOs framework above, the research question for Scoping review is to analyze the administration of iron supplements for anemia prevention in pregnant women.

METHOD

This research used the PRISMA-ScR checklist framework, extending the scoping reviews checklist. There were 22 assessment items, including 20 important reporting items and two optional items for preparing a scoping review (Tricco et al., 2018). Identifying relevant articles and key parameters that correspond to the inclusion criteria in this scoping review are as follows: original research articles, free full-text articles, articles published in 2018-2022, articles published in English, articles discussing anemia prevention programs in pregnant women, qualitative and quantitative articles, documents, reports, and guidelines from WHO. The literature searching in this study used several relevant databases of journal articles subscribed by the Universitas 'Aisyiyah Yogyakarta. Certain databases accessed to search for journal articles include Pubmed, ProQuest, and Ebsco. In searching for articles in a database, the keywords are ((((((pregnant women) OR (pregnant)) OR (pregnancy)) AND (prevent)) AND (anemia)) OR (iron deficiency). Afterward, the following action is to filter and eliminate several articles using the management software Rayyan.ai. The findings of several articles were then described in the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) eScR (Tricco et al., 2018) as follows in figure 1.

Data Charting

In this stage, the researchers mapped the data into a table containing the selected articles, including title, authors, year, country, research objectives, research methods, population and samples, and research results (table 2).

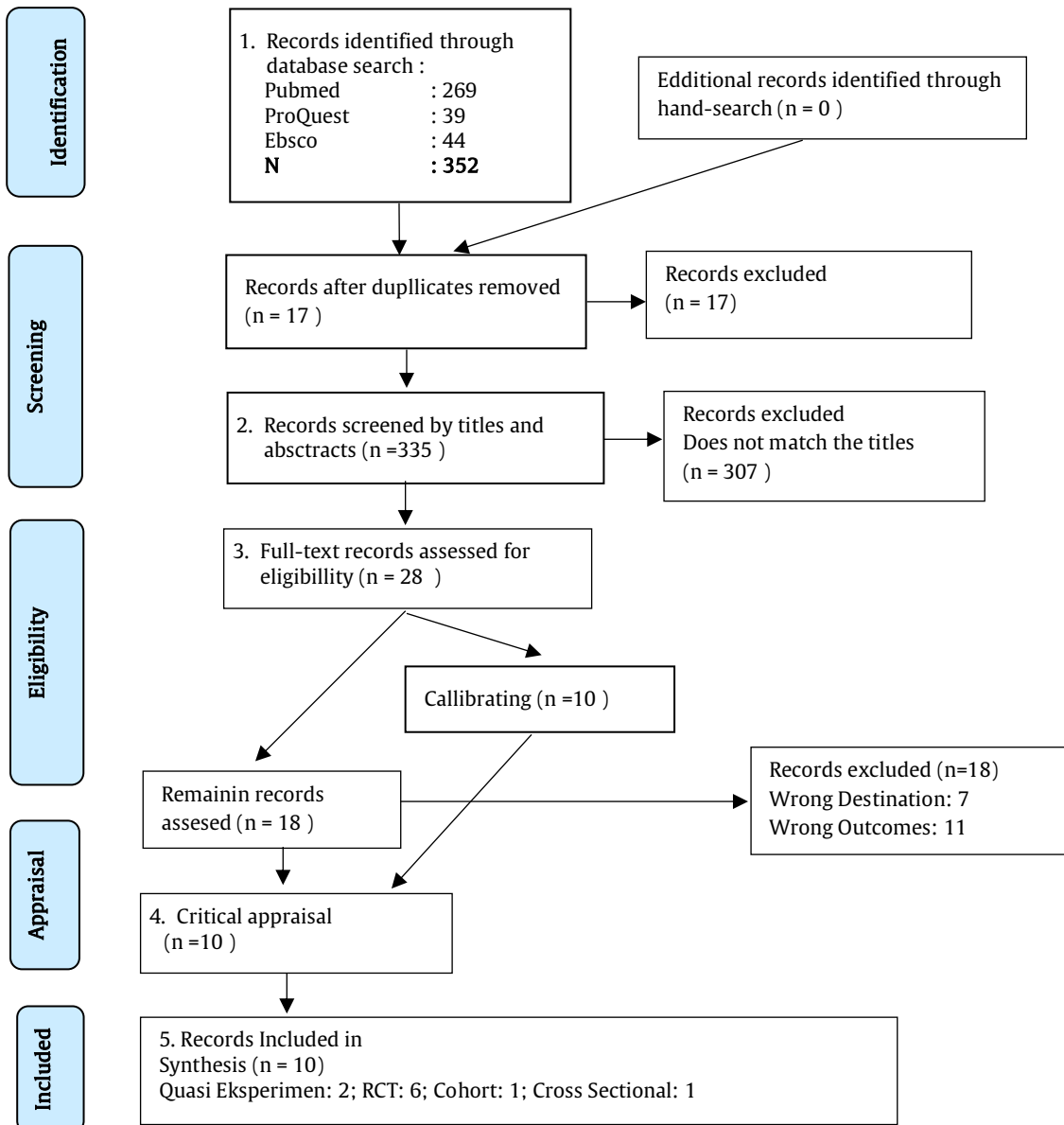


Figure 1. Systematic Reviews and Meta-analyses (PRISMA)

Table 2. Data Charting

No	Tittle/ Author/ Years	Countries	Objectives of the Study	Types of Research	Data Collection	Participants/ Sample Size	Results
1.	Effects Of Iron Supplement ation On Red Blood Cell Hemoglobin Content In Pregnancy (Schoorl et al., 2012)	Netherlands	Evaluate the possible beneficial effect of iron supplementati on on reticulocyte hemoglobin and blood cell content in the third trimester of pregnancy.	Quantitative Quasi Experiental	Data were collected by screening pregnant women in the third trimester with a Hb concentration of 101-110 g/L. It was completed with multivitamins. After four weeks of iron supplementati	The sample was 25 pregnant women in the third trimester with inconclusive Hb concentratio ns in the range of 101-110 g/L.	The results of the reticulocyte calculation showed an increase in levels after iron supplementation compared to before supplementation. After supplementation, the Hb concentration showed a significant increase from 105±6 g/L to 115±5 g/L (P≤0.001).

					on, blood samples were taken to evaluate RBC and reticulocyte hemoglobin content.		
2.	Daily Versus Twice Daily Dose of Ferrous Sulphate Supplementation in Pregnant Women (Adaji et al., 2019)	Abuja Nigeria	Compare the effectiveness of once-daily dosage versus twice-daily dosage of iron to prevent iron deficiency anemia in pregnancy.	Quantitative Randomized Controlled Trial	Data collection was employed by instructing women to take iron supplements by 30 minutes before eating and not allowed to take the supplements with tea, coffee, or milk.	The study sample was 91 pregnant women recruited at 14-24 weeks of gestation who had hemoglobin levels of 10 g/dl and 14.5 g/dl.	Serum hemoglobin was significantly lower (P = 0.002) among those taking once-daily supplementation than those receiving twice-daily supplementation. However, side effects were significantly higher in the twice-daily group (P = 0.005, P = 0.043 and P = 0.004 respectively).
3.	The Effectiveness Of Different Doses Of Iron Supplementation And The Prenatal Determinants Of Maternal Iron Status In Pregnant Spanish Women: ECLIPSES Study (Iglesias Vázquez et al., 2019)	Spanish	Evaluate the effectiveness of different dosages of iron supplementation.	Quantitative Randomized Controlled Trial	Employ interview techniques with questionnaires. Medical and surgical histories and obstetric data were also recorded.	The population in this study was 791 women. The sample in this study was 534 pregnant women at 36 weeks of gestation.	This study showed that routine monitoring of Hb and SF was required during antenatal examinations. Daily iron supplementation of 20 mg compared to 40 mg during pregnancy reduced the risk of hemoconcentration by 69% (p=0.035).
4.	Effects of lipid-based nutrient supplements or multiple micronutrient supplements compared with iron and folic acid supplements during pregnancy on maternal haemoglobin and iron status (Jorgensen et al., 2018)	California	Test the effects of three iron-containing supplements among Malawian pregnant women.	Quantitative Randomized Controlled Trial	In this study, data were collected by the following conditions: taking 60 mg of iron and folic acid every day, 20 mg of iron added with 17 micronutrients in capsules, or lipid-based nutrient supplements of 118 kcal with 20 mg iron plus 21 micronutrients, protein, and fat	The population in this study was 1,391 women who were divided into three intervention groups. The sample in this study was women under 20 weeks of gestation taken randomly.	The results of this study were the effects of the three iron-containing supplements showing the same results. The mean of Hb at 36 weeks in the IFA group was more significant than that in the MMN group (P=0.058). The average ZZP was lower than the IFA group compared to the two LSN groups (p<0.001) or MMN (p=0.046).
5.	Comparison of efficacy & safety of iron polymaltose complex &	India	Compare the efficacy and safety of FS to other iron preparations such as IPC	Quantitative Randomized Controlled Trial	By dividing into three groups, group A received FS 60 mg of iron supplements	Pregnant women between 12 to 26 weeks of gestational	The results showed that FS, IPC, and FeA had an efficacy profile and comparable safety in the treatment of pregnancy IDA. Hemoglobin was

		ferrous ascorbate with ferrous sulphate in pregnant women with iron-deficiency anaemia (Aggarwal et al., 2012)	and FeA, which were commercially available for treating IDA in pregnant women.		twice a day and 5 mg of folic acid supplements; group B received IPC capsules of 100 mg once a day and 0.55 mg of folic acid; and group C received FeA supplements containing 100 mg of iron and 1, 5 mg of folic acid once a day.	age suffered from moderate anemia.	similar in all three groups except on day 90, when FeA group had significantly higher hemoglobin levels than FS group (p<0.05).
6.	Effect of Directly Observed Oral Iron Supplementation During Pregnancy on Iron Status in a Rural Population in Haryana (Ahamed et al., 2018)	India	Estimate the decreased prevalence of anemia, improvement in iron status, and compare compliance with oral iron supplementation during pregnancy.	Quantitative Randomized Controlled Trial	Blood samples were then taken to measure hemoglobin and ferritin levels using the interview technique as a pretest.	The study population was 400 pregnant women with 12-16 weeks of gestational age in rural India.	After 100 days of IFA supplementation, the reduction in anemia in the intervention group was 6%, higher than that in the control group (p<0.219). The average increase in hemoglobin levels above the control group was 0.52 g.dl in the intervention group (p<0.001). The intervention group's average compliance percentage was almost 9%, higher than that of the control group (p=0.001).
7.	A community-based cluster randomised controlled trial in rural Bangladesh to evaluate the impact of the use of iron-folic acid supplements early in pregnancy on the risk of neonatal mortality: the Shonjibon trial (Huda et al., 2018)	Bangladesh	Evaluate the impact of maternal antenatal IFA supplementation on perinatal outcome.	Quantitative Randomized Controlled Trial	Data collection in this study used in-depth interview techniques on 35 pregnant women, 20 elderly women, and 11 husbands.	The population in this study was 40 to 50 villages with an average population of 13,000 people in the Dhaka Division of Bangladesh.	The results of this study were a report on the impact of several causes of anemia in pregnant women, namely the lack of maternal compliance with iron supplements consumption during pregnancy, as one of the anemia prevention programs that had unsatisfactory results.
8.	The Effect of Pregnancy in the Hemoglobin Concentration of Pregnant Women: A Longitudinal Study (Feleke,	Ethiopia	Estimate and identify the determinants of hemoglobin concentration before pregnancy, during pregnancy, and after delivery/child	Quantitative Prospective Cohort	The collection was done by interviewing, reviewing medical records, and taking blood and stool samples. Then a pretest was carried out on	The total population was 81,000 fertile women aged 15-49 years. At the same time, the sample in the study used 1,709	Hookworm could reduce maternal hemoglobin concentration by 0.24g/dl, but iron supplementation in pregnancy could increase hemoglobin concentration by 1.02g/dl. Hemoglobin concentration increased with iron supplementation of 1.02 g/dl [95% CI: 0.97-1.07]

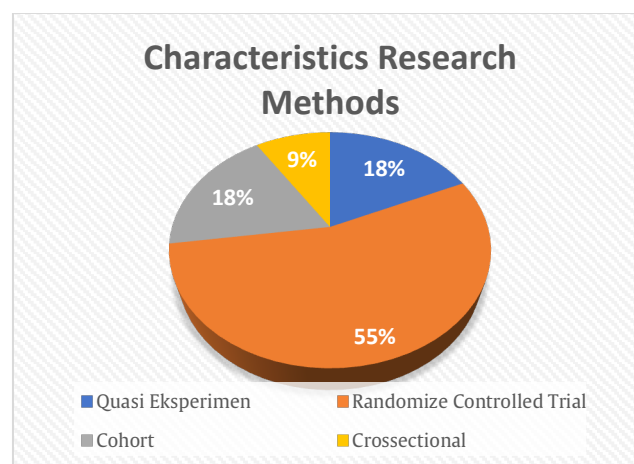
	2020)		birth.		5% of participants to ensure the quality of the data.	participants.	with birth weight 0.14 g/dl [95% CI: 0.02-0.011].
9.	Effect of a community-based approach of iron and folic acid supplementation on compliance by pregnant women in Kiambu County, Kenya: A quasi-experimental study (Wanjira et al., 2020)	Kenya	Determine the influence of the community-based IFAS distribution approach on compliance and assess the side effects and mitigation of pregnant women in Kiambu.	Quantitative Quasi Experimental	The questionnaire was administered by a semi-structured interview consisting of 23 closed-ended questions. One of the questions in the questionnaire was about the number of supplements consumed in the last seven days.	The sample size for each group was 170; the total sample of the two groups was 340.	The results showed an increase in compliance with IFAS in both groups. The level of compliance increased by 8 percentage points (from 63.8% to 71.4%) and 6 percentage points (from 68.5% to 74.3%); the two groups did not have statistical differences because the DID between those two groups was 0.02, and CI is 0.02-0.04.
10.	Assessment of adherence to iron supplementation among pregnant women in the Yaounde gynaeco-obstetric and paediatric hospital (Fouelifack et al., 2019)	Africa	Estimate the level of compliance with iron supplementation during pregnancy and evaluate the factors that influence compliance with iron supplementation during pregnancy.	Quantitative Cross Sectional	The principal investigator interviewed women who were willing to participate in the study. Compliance was measured using The eight-item Morisky Medication, a structured self-report. The collected data were processed using the SPSS application.	The population in this study were all postpartum women at Yaounde Gyaneco-Obstetrics, and Children's Hospital during the study period. The sample was 304 women who gave birth.	Side effects were the main factors affecting compliance with iron supplementation. Forgetfulness was one of the main reasons for not taking iron regularly. Women without side effects were about three times more likely to comply with iron supplementation than those with side effects OR= 3.73 [2.43-5.71] P=0.04.

RESULTS AND DISCUSSION

The following action was to search for articles corresponding to keywords based on the PEOs framework and screen articles using reference manager tools Zotero and Rayyan. Then, there were ten articles found corresponding to the scoping review questions as outlined in the Prisma ScR; Critical Appraisal was conducted using Joanna Briggs Institute (JBI) format.

a) Characteristics of Research Methods

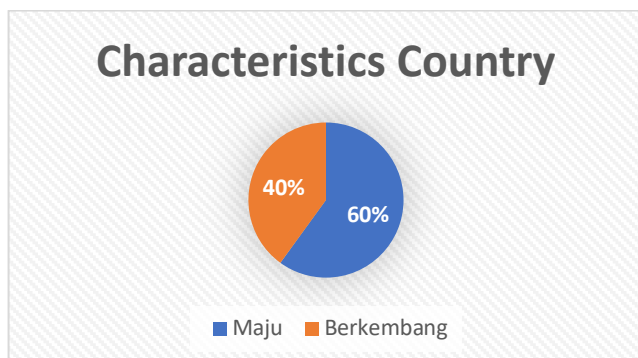
After conducting a critical appraisal and data charting, ten articles were found. There were nine quantitative articles and one qualitative article obtained in different ways: Randomized Control Trial method (six articles), Quasi-experimental (two articles), Cohort (one article), and Cross-sectional (one article).



b) Characteristics Based on Country

All articles were obtained from the Netherlands, Nigeria, Spain, California, India, Bangladesh, Ethiopia, Kenya, and

Africa. Furthermore, they were grouped into the categories of developed countries and developing countries. Developed countries included the Netherlands, Spanish, California, Ethiopia, Kenya, and Africa while developing countries were from India, Nigeria, and Bangladesh.



Critical Appraisal within Sources of Evidence

All articles were assessed using the Joanna Briggs Institute (JBI) format; three articles were discovered with the overall "YES" checklist in article numbers [1, 6, and 9] because the method used in the study was in accordance with the research. Certain articles were also appropriate but did not clearly state the population and samples contained in article numbers [2, 3, 5, and 7]; thus, reviewers had to read on several occasions to get samples, and most articles had no attached confounding variables and explained how to control confounding variables that must be included in the study. The findings in articles number [4, 8, and 10] were deficient because there where two component columns with a checklist of 'No'. It happened because article [4] did not provide the same intervention and did not follow up at the same time; meanwhile, articles [8 and 10] did not include confounding factors and explained how to deal with them.

Based on the ten articles obtained, the author revealed several discussion themes, which were discussed subsequently in the discussion. Certain themes obtained by the authors include:

Table 3 Mapping Themes

No	Theme	Sub Theme	Article
1.	Effectiveness	Benefits of iron Iron needs during pregnancy Compliance	A1, A2, A3, A4, A6, A7, A8 A2, A3, and A4 A2, A6, A9, and A10
2.	Impact	The impact of Iron deficiency anemia Side effects	A2, A5, and A10 A2, A5, and A10

Theme 1: Effectiveness

In this review, some articles discussed the challenge of effectiveness, including the benefits of iron in articles 1, 2, 3, 4, 6, 7, and 8. Furthermore, articles 2, 3 and 4 discussed the demand for iron supplementation during pregnancy, and articles 6, 9, 10 discussed compliance with iron consumption in pregnant women.

1) Benefits of Iron

The iron supplement is one of several ways to overcome the global problem of iron deficiency. Correspondingly, pregnant women require twice more iron to take, which must be fulfilled during pregnancy. Thus, pregnant women need to take iron supplements. Iron is essential in pregnancy, and iron is a component that carries oxygen to the muscles and builds enzymes and collagen. Iron functions in pregnant women include nutrition for the fetus, preventing iron deficiency anemia, preventing bleeding during childbirth, and reducing mortality due to bleeding during childbirth (Kemenkes RI, 2018). Iron can be obtained from food such as meat, liver, green vegetables such as spinach, beans, eggs, and several types of fruit (Allen, 2002).

In line with research conducted by (Imdad & Bhutta, 2012), consuming iron supplementation regularly during pregnancy can reduce about 20% of the prevalence of low birth weight (LBW). Iron supplements for the prevention of nutritional anemia problems have been scientifically tested for effectiveness if it is following the dosage and provisions (RI, 2018). Research conducted by (Keswara & Hastuti, 2017) reported that the results of iron consumption affected the increased hemoglobin.

2) Iron Needs During Pregnancy

During pregnancy, it is essential to take different iron in each trimester. Generally, during pregnancy, pregnant women require around 900 mg of iron. The demand for iron in the first trimester of pregnancy is lower than before pregnancy because pregnant women do not experience menstrual cycles as before pregnancy (Saptarini et al., 2016). In the second to the third trimester of pregnancy, the blood volume will increase by up to 35%, and during childbirth, women need more additional iron, around 300-350 mg, due to blood loss (Susiloningtyas, 2012).

The demand for iron in pregnant women is different in each trimester. The iron increases in the first trimester of pregnancy from 0.8 mg/day rise to 6.3 mg per day in the third trimester. In the second to the third trimester of pregnancy, the demand for iron can be fulfilled by food consumption and supplementation obtained during antenatal visits. The demand for iron in the first trimester is ± 1 mg/day and 30-40 mg for the demand of the fetus and red blood cells; in the second trimester of pregnancy, pregnant women require ± 5 mg/day, red blood cells 300 mg and conceptus 115 mg; meanwhile, in the third trimester during pregnancy, pregnant women need ± 5 mg of iron per day, 150 mg of red blood cells and 223 mg of the conceptus (Hinderaker et al., 2002).

Providing 60 mg/day can increase Hb levels by 1% g per month. According to the national program, the recommendation for iron combination suggests a combination of 60 mg of iron and 50 nanograms of folate for polymorphic anemia. The exact dosage of iron for anemia prevention in pregnant women is still uncertain (Zulkifli, 2011). Every drug consumption must be balanced with food

or drink that does not affect absorption. There are two types of iron in food, namely heme iron found in meat, fish, and poultry, while non-heme iron is found in vegetables and animal products (Zijp et al., 2000).

Several foods and drinks can help the absorption process, such as foods or drinks containing lots of vitamin C (Samson et al., 2020). One of the drinks that can inhibit iron absorption is tea and coffee because they have tannins that bind iron minerals (Lynch et al., 1983). Tea contains polyphenolic compounds that can bind minerals such as zinc, iron, and calcium when it is oxidized. Therefore, tea is one of the most powerful inhibitors that slow down iron absorption. Consumption of a cup of tea contains approximately 20-50 mg of polyphenols, which can inhibit iron absorption by 50-70%. Whereas if consuming 2-3 cups, about 100-400 mg of polyphenols can slow iron absorption by 60-90% (Mascitelli & Goldstein, 2011).

3) Compliance

The prevalence of anemia in pregnant women can be influenced by several factors: compliance with iron supplements consumption regulations in pregnant women. Consumption of iron supplements in pregnant women is significant in inhibiting the occurrence of anemia in pregnant women, which negatively affects the mother and fetus (Harding et al., 2017). In line with research conducted by (Ahamed et al., 2018), 60% of forgetfulness factor is one of the reasons for non-compliance with iron supplements consumption, the following factor is 30% of drug side effects that result in pregnant women not complying with the consumption of iron tablets. Furthermore, it was supported by research (Fouelifack et al., 2019) that the reasons for non-compliance with iron supplementation in pregnant women are due to side effects that cause nausea and discomfort, forgetfulness, unaffordable iron supplements, and the feeling of dullness or boredom experienced by pregnant women in taking iron supplements. Based on research conducted by (Nimwesiga et al., 2021), in addition to forgetfulness and drug side effects, other factors are social culture and level of knowledge. Accordingly, socialization on iron consumption among pregnant women is required to improve consumption compliance.

Theme 2: Impact

1) Impact of Iron Deficiency Anemia

The high maternal mortality rate due to iron deficiency anemia is closely related to anemia. Iron deficiency anemia has terrible effects such as reduced motor abilities of children, reduced cognitive abilities, decreased IQ abilities, decreased mental abilities, and disruption of individual productivity, which impacts financial conditions (Horton & Ross, 2003). The impact of iron deficiency anemia in pregnancy can cause low birth weight, premature birth, complications in pregnancy and childbirth, bleeding, and other harmful effects (Astapani, Harahap Anggriani, 2020).

2) Side effects

Consumption of iron supplements can generate side effects in several individuals, especially pregnant women, such as discomfort in the pit of the stomach, diarrhea, constipation, nausea, and vomiting. Generally, side effects occur due to dosage, which is not suitable for each body's absorption capacity (Amanah et al., 2019). Consumption of

iron supplements can generate side effects in some individuals, especially pregnant women, such as discomfort in the pit of the stomach, diarrhea, constipation, nausea, and vomiting. Generally, side effects occur due to dosage not being suitable for each body's absorption capacity (Kementerian Kesehatan Republik Indonesia, 2020).

LIMITATION OF THE STUDY

The findings obtained in the scoping review revealed that certain articles were complex in finding the sample, confounding factors, and how to control them. Hence, the authors had to read them on several occasions. The articles obtained mainly discussed the benefits of iron supplements, which means that there were not many sub-themes that can be concerned in the discussion.

CONCLUSION AND RECOMMENDATION

Iron supplements in pregnant women could increase the concentration of hemoglobin (HB), affecting the health of the mother and fetus. During pregnancy, the fetus also required iron intake, which was helpful for optimal growth and development. It is necessary to pay attention to the dosage of consumption in each trimester according to the demand of pregnant women. Consumption of iron supplements could generate side effects such as discomfort in the pit of the stomach, diarrhea, constipation, nausea, and vomiting. These side effects made pregnant women not compliant with consuming iron. In addition to the side effects, forgetfulness, inaccessibility, and laziness were factors for non-compliance with the consumption of iron supplements. The consumption of supplements in pregnant women required balance with foods or drinks that did not affect iron absorption and avoided drinks such as tea and coffee. It is expected that there is a requirement for education regarding compliance with iron consumption by health workers such as doctors, nurses, and midwives to pregnant women, which means that they can reduce the prevalence of anemia.

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ETHICAL CONSIDERATIONS

This review is not conducted with an ethical review.

FOUNDING STATEMENT

There is no interference from other parties in writing this scoping review, purely from the authors.

CONFLICT OF INTEREST

In writing this scoping review, the authors do not have a conflict of interest, and the authors will be responsible for writing a scoping review.

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