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Pregnant Women's Compliance Experience In Consuming Fe Tablets In Bukittinggi City In 2024

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Abstract.*Iron deficiency is a common cause of anemia during pregnancy. The low consumption of Fe tablets is related to compliance with consumption. The purpose of this study was to determine the compliance of pregnant women taking iron tablets in the second trimester in Bukittinggi City. This was a qualitative study using a case study method. A purposive sampling technique was used, with the main informant being pregnant women in the second trimester in Baratan Village. Data were collected using interview techniques, observation, and documentation analysis and then validated using data triangulation, observer triangulation, theory triangulation, and method triangulation. The results of this study were analyzed based on data grouping. Testing data assumptions, alternative data explanations, and the results of the study were written. The compliance of pregnant women in taking Fe tablets shows the compliance of pregnant women in the second trimester in taking Fe tablets and how pregnant women know the benefits and impacts of not taking Fe tablets. Researchers know how long pregnant women take Fe tablets, and family support is a reinforcement for pregnant women if they forget when taking Fe tablets. Pregnant women who routinely have ANC will also receive Fe tablets from the midwife who checks for compliance with taking Fe is better when Fe tablets are also available. The opinion of researchers of primigravida pregnant women in the second trimester shows that the first, second, and third subjects are pregnant women in the second trimester who have experience taking Fe tablets. They reported the same complaints, namely nausea and vomiting after taking Fe tablets; even so, they remained obedient and routinely took Fe tablets every day, with and without being reminded by their families, they still routinely took Fe tablets. Some mothers understand the impact of not taking Fe tablets, namely, anemia and bleeding. During the interviews, all mothers said that they routinely checked their pregnancy every month with a midwife accompanied by their husbands.*

Keywords: *Experience, Compliance, Fe Tablets, Pregnant Women*

1. INTRODUCTION

Anemia in pregnant women is closely related to maternal and infant mortality and morbidity, including the risk of miscarriage, stillbirth, prematurity, and low birth weight. In developing countries, maternal mortality rates are closely related to the incidence of anemia during pregnancy. Iron deficiency is the most common cause of anemia during pregnancy (Sumi Anggraeni, 2019). Low consumption of FE tablets is related to compliance with consumption. The success of providing FE tablets depends on the compliance of pregnant women to consuming FE tablets. High coverage of FE tablets does not have an impact on reducing anemia if compliance with consuming Fe tablets is still low (Septiani, 2017).

The coverage of providing a TTD of at least 90 tablets to pregnant women in Indonesia in 2022 is 94.2%. This figure has increased by 83.6 % %compared to 2021. The provinces with the highest coverage of providing TTD to pregnant women are Bali Province at 92.6%, Jambi at 92.1%, and East Java at 91.3%. The provinces with the lowest achievement are West Papua at 37.5%, Papua at 56.8%, and Southeast Sulawesi at 64.1% (WHO, 2014). The Bondowoso

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Regency is 89.9%. In Bukittinggi City, it was 65% in 2024. The coverage of iron tablets obtained by the pregnant women who received iron tablets was 73.2% and 26.8%, respectively. From pregnant women, data that received iron supplement tablets with a larger amount of ≥90 tablets were 24% and those <90 tablets were 76%. The consumption of iron supplement tablets in pregnant women who consumed <90 tablets was 61.9%, and that of those who consumed ≥90 tablets was only 38.1% (Nurmasari, V., & Sumarni, 2019). The results of a preliminary study conducted by interviewing three pregnant women found that one pregnant woman (33%) said she sometimes forgot and was lazy because of side effects (nausea, vomiting, and dizziness), and one pregnant woman (33%) said she did not know about the importance of supplement tablets and the threat of anemia in pregnant women and was afraid of having a large baby; one pregnant woman (33%) said there was no special counseling from health workers and did not know the effects of anemia.

During pregnancy, the body requires high levels of oxygen. This causes an increase in erythropoietin production in the kidneys. This increase caused the number of red blood cells to increase by approximately 20-30%. This increase is not comparable to the increase in plasma volume of 40-50%, causing a blood thinning process that results in a decrease in hemoglobin concentration (Agustina, 2019). Factors that can cause anemia are a diet that is less diverse and does not meet balanced nutrition, lack of intake of foods rich in iron, repeated pregnancies in the near future, or the next pregnancy interval is less than 2 years; the mother experiences Chronic Energy Deficiency (CED) with Upper Arm Length (LiLA) <23.4 cm, experiencing infections such as worms and malaria, especially in endemic areas (Aminin, F., & Dewi, 2020). Factors that influence the compliance of pregnant women in consuming iron tablets include antenatal care (ANC) visits, tablet supply, side effects and benefits felt by mothers after consuming iron tablets, counseling from health workers, family support, traditional beliefs, and knowledge of pregnant women regarding iron tablets (Birhanu, TM, Birarra, MK, & Mekonnen, 2018).

The impact of anemia on mothers during pregnancy includes Hemorrhagic Post Partum (HPP) 28%, shock 24%, prolonged labor 20%, uterine atony 11%, uterine inertia 8%, other causes 5%. While the impact of anemia on newborn babies includes BLLR 11% and congenital defects 7%, long-term impacts that can occur are changes in brain function and body cells due to iron deficiency during pregnancy, disorders, or obstacles to growth (stunting) (Darmawati, Laila, K., Kamil, H., & Tahlil, 2018). Preventive efforts by health workers provide counseling to pregnant women to routinely consume iron-boosting tablets and provide counseling to families and community leaders with one of them so that pregnant women and their husbands

can routinely drink FE; they can check the KIA book drinking control card so that it can be controlled (Ruwayda, 2016).

Research Purposes

The aim of this study was to determine the compliance of pregnant women consuming FE tablets in Bukittinggi City.

2. RESEARCH METHODS

This is a qualitative study with a case study research strategy. A purposive sampling technique is used to determine a sample with certain considerations that are considered to freeze the data so that it will make it easier for researchers to reveal the objects being studied. Data were collected using interview techniques, observations, and recording devices and then validated using data triangulation, observer triangulation, theory triangulation, and method triangulation. Three pregnant women were interviewed in this study. The subjects selected were those who met the criteria for pregnant women in the first trimester (gestational age 1-3 months) with a mother's age of 20-35 years. The results of the study were analyzed based on data grouping, testing data assumptions, alternative data explanations, then the results of the study were analyzed and presented

3. RESEARCH RESULT

Observation of Subjects

At the time of observation, the subject was short, had yellow skin, and appeared healthy. When the researcher came to the participant’s house, she was neatly and cleanly dressed and wore a headscarf. When the researcher arrived, the subject invited the researcher to sit in the living room. The researcher stated the purpose and objective of the interview with the subject, and then the researcher interviewed the subject. During the interview, the subject was enthusiastic and answered all questions related to the experience of pregnant women's compliance with consuming Fe tablets in Bukittinggi City. The subject was a pregnant woman who had entered her second trimester at a gestational age of 5 months. The participant worked as a housewife. At home, the subject lived with her husbands and parents.

Observation of the Setting

At the time of the observation, it was conducted at the subject's house, namely in the living room, because the subject's place to relax and chat and the living room are where the

subject receives guests. The living room is wide and clean. The researcher then chatted with the subject, such as introducing and asking for news.

In the interview technique, the researcher asked the subject for permission to be recorded by the researcher regarding the questions and answers from the subject so that it became authentic evidence from the researcher and the subject that they had conducted the interview. According to the questions prepared by the researcher and the answers from the subjects regarding the experience of taking Fe tablets during pregnancy.

Documentation Analysis

Based on the analysis of the documentation obtained in the form of a KIA book, Mrs. W experienced weight loss when she was 3 months pregnant because her appetite had decreased slightly. However, when she was five months pregnant, Mrs. W's weight increased again because the subjects became hungry often and ate a lot. Mrs. W routinely underwent a pregnancy check-up once a month at the integrated health post and to an obstetric specialist.

Interview results

Based on the results of the study using direct interview techniques that have been conducted in Bukittinggi City, to determine the experience of adherence to taking Fe tablets, data was obtained based on the results of the study conducted by the 3 subjects, it was found that the first subject, Mrs. W with a background as a housewife, aged 24 years, is pregnant with a gestational age of 5 months, said she knows what iron tablets are and their benefits to prevent anemia, her complaint after taking Fe tablets is nausea, how to take it with water. The mother does not know the impact of not routinely taking Fe tablets; even so, the mother takes them routinely and her husband always reminds her. Mrs. W routinely checks her pregnancy every month at the integrated health post, health center, and obstetric specialist.

The second subject is Mrs. M with a background as a 21-year-old housewife, who is 6 months pregnant and knows what blood supplements are, namely blood supplement tablets that are useful for health vitamins during pregnancy. After taking the blood supplement tablets, the mother complained of nausea. When taking blood supplement tablets, she drank water every night before going to bed. Mrs. M knows that the impact of not taking blood supplement tablets is that she can become anemic, especially since Mrs. M has checked her HB and the results are low; therefore, Mrs. M always routinely takes blood supplement tablets so that her HB does not drop further. However, when taking blood supplement tablets, no one reminds

Mrs. M of always remembering to take blood supplement tablets. Mrs. M routinely comes for obstetric checkups.

The third subject is Mrs. S, with a background as a housewife, is pregnant with a gestational age of 7 months and is not obedient in taking blood-boosting tablets every day, due to a lack of awareness from herself, feeling bored if taking it every day, and often hearing myths from neigHBors that if taking blood-boosting tablets, blood pressure will increase. Therefore, the mother becomes afraid and lazy of consuming blood-boosting tablets.

From the results of the study conducted by three observer triangulations on the subject, it was found that the observer triangulation on the first subject, Mr. A, with a background as a farmer, said that his wife knew what blood-boosting tablets were, which were blood boosters or pregnancy vitamins for anemia. His wife complained of nausea every time she drank blood boosters; even so, his wife felt that if she did not drink it could have a negative impact on the pregnancy. Mr. A's husband often reminded her of drinking blood-boosting tablets.

The results of the observer triangulation of the second subject, Mr. H, with a background as a farmer, indicated that his wife knew about the blood-boosting tablets.vitamins and took them every night, even though she felt nauseous. Because his wife's HB lab results were low, he routinely took Fe tablets so that her HB would not drop further. His wife routinely came to the midwife for her pregnancy checkups, and Mr. H also accompanied his wife to the midwife. The results of the observer triangulation of the third subject, Mr. K, with a background as Mrs. S’s husband, who works as a construction worker, said that his wife did not really understand the benefits of taking iron tablets and the risks of not taking them. The side effects experienced by his wife were nausea and dizziness, and he became lazy and bored if she took them every day. His wife usually took iron tablets with water before going to bed. According to Mr. K, his wife always received iron tablets from an integrated health post or from the nearest midwife, where his wife checked her pregnancy.

4. DISCUSSION

Pregnancy is the fertilization or union of spermatozoa and ovum, followed by nidation or implantation, and is calculated from the time of fertilization until the birth of the baby. Normal pregnancy lasts for 40 weeks (10–9 months). Pregnancy is divided into three trimesters: the first trimester lasts for 12 weeks, the second trimester lasts for 13 weeks starting from the 27th week, and the third trimester lasts from the 28th week to the 40th week (Wahyuni 2019).

Nutritional needs in pregnant women function as a source of energy, growth, building substances, and defense and repair of body tissues. Nutrition consists of carbohydrates, proteins, fats, vitamins, and minerals that are required for healthy living. Nutritional status reflects the fulfillment of nutritional needs (Yuliarti 2018).

The compliance of pregnant women to consuming iron tablets or Iron Supplement Tablets (TTD) is very important to prevent anemia in pregnant women, which can cause several risks. Knowledge is the main factor affecting the compliance level of pregnant women who consume Fe tablets. This knowledge can be in the form of the importance of consuming Fe tablets, how to consume them correctly, and the risks that will occur if Fe tablets are not consumed. Pregnant women with this knowledge tend to be more compliant with consuming Fe tablets. Pregnant women must receive adequate nutrition, both in terms of quantity and menu composition, and have access to health education on nutrition. Pregnancy malnutrition causes blood volume to decrease (Ruwayda. 2016a)

Compliance with iron tablets for pregnant women is an awareness and obedience to consuming iron tablets every day. Compliance in consuming iron tablets was measured by the accuracy of the number of tablets consumed, the accuracy of the consumption of iron tablets, and the frequency of consumption per day (Oktaviani 2018). Factors that cause non-compliance of pregnant women in taking iron tablets are individuals who feel they are not sick, ignorance of the symptoms or signs and impacts caused, abnormalities of pregnant women, low motivation of pregnant women to take iron every day for a long time, side effects such as nausea, and pain in the stomach. Non-compliance of pregnant women in consuming iron tablets is also caused by factors such as forgetting, fear of the baby getting larger, lack of awareness of the importance of iron tablets, lack of awareness of the threat of anemia for pregnant women and babies, and side effects such as nausea or dizziness caused by taking iron tablets (Agustina 2019).

The side effects that arise also affect the compliance of pregnant women to consuming Fe Tablets. As in subject 3, she experienced nausea and dizziness when consuming Fe Tablets; therefore, she tended to be non-compliant and bored in consuming Fe Tablets. However, it comes back to the knowledge factor and the desire to have knowledge. Pregnant women who want knowledge can determine what things can reduce the side effects that arise. On the other hand, pregnant women who do not want to have knowledge tend to be indifferent and noncompliant in consuming Fe Tablets because they avoid the side effects that arise. Research on the relationship between side effects and compliance of pregnant women consuming Fe tablets is also in line with research conducted by Yanti 2022; more than 50% of pregnant

women who do not consume Fe tablets experience complaints in the form of nausea (Agustina, 2019)

Due to the risk of anemia in pregnancy, especially anemia, it can indirectly cause maternal death. Mothers with anemia are at risk of experiencing postpartum hemorrhage and giving birth to premature babies or babies with low birth weight (Aminin, F., & Dewi 2020). Iron (Fe) tablets are supplements containing iron and folate administered to pregnant women to prevent iron deficiency anemia during pregnancy, which functions as a former of hemoglobin (HB) in the blood. Iron (Fe) tablets are very much needed by pregnant women, so they are required to consume at least 90 Fe tablets during pregnancy (Agustina 2019).

The targets of Fe tablets according to (Oktaviani 2018) are pregnant women to postpartum, toddlers (6-60 months), school-age children (6-12 years), adolescent girls (12-18 years), and women of childbearing age (WUS). Iron requirements according to (Chalik 2019) include: Trimester I: Iron requirements ± 1 mg/day, (basal loss 0.8 mg/day) plus 30-40 mg for the needs of the fetus and red blood cells, Trimester II: Iron requirements ± 5 mg/day, (basal loss 0.8 mg/day) plus red blood cell requirements 300 mg and conceptus 115 mg and trimester III: Iron requirements ± 5 mg/day, (basal loss 0.8 mg/day) plus red blood cell requirements 150 mg and conceptus 223 mg.

Based on the researcher's opinion on the study of pregnant women's compliance experience in consuming Fe tablets in Bukittinggi City by interviewing three pregnant women with a gestational age of 1-3 months, it shows that, on average, the subjects only know a little about the benefits of giving Fe tablets, and the average complaint after taking Fe tablets is feeling nausea and vomiting, but of the three subjects, they are diligent in checking their pregnancy. In response to this, a health worker must provide knowledge and information about the benefits of providing Fe tablets, and information on how to respond to and overcome the symptoms of nausea and vomiting that exist so as not to cause nausea and vomiting, which can result in the subject still wanting to take Fe tablets.

5. CONCLUSION

As many as two out of three pregnant women in Bukittinggi City are compliant with consuming Fe tablets. This is based on the knowledge of the importance of consuming Fe tablets and the risks that arise if they are not compliant with consuming Fe tablets. However, pregnant women who tend to be non-compliant have less knowledge and are less comfortable with the side effects that arise if they consume Fe tablets.

SUGGESTION

Based on the results of the analysis above, the researcher provides several suggestions related to the experience of compliance with taking Fe tablets in pregnant women, namely that subjects should continue to increase their knowledge and the importance of understanding what Fe tablets are, and the benefits and impacts of not taking Fe tablets in order to achieve compliance in consuming Fe tablets.

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